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The Implicit Relational Assessment Procedure and the Role of Context: The Impact of Working with Sex Offenders

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The Implicit Relational Assessment Procedure and the Role of Context: The Impact of Working with Sex Offenders

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NB: Due to recruitment issues, the topic of the thesis changed following the completion of the systematic review, therefore this does not relate to the journal paper presented in this thesis as it forms a separate component of the course requirement.

A systematic review of research into the psychological characteristics of internet sex offenders and contact sex offenders against children

Abstract

This systematic review considers the research into differences between people convicted of contact only sexual offences against a child/children (aged under 16), and those convicted of internet offences only against the same group (e.g. possession of images). This is a fast emerging area of research interest; and there are particular clinical implications regarding reducing the risk of re-offending in these groups, and appropriate interventions to address the reasons why individuals commit such offences. A search was conducted using the following databases: CINAHL, Web of Knowledge, Academic Search Elite, Medline and PsycInfo, as well as a hand search of journals with a main focus on publishing research into sexual offending. 10 papers were reviewed, and the results do not suggest a distinct psychological profile of either offender group, although some differences were reported between the two groups with regards to cognitive distortions, risk, psychopathy, locus of control and assertiveness.

Keywords: Internet child sex offending, contact child sex offending, characteristics

Introduction

The growth in the Internet in recent years has offered people with a sexual interest in children a new way to access sexual images of children. Arguably, the internet has made such images more accessible, therefore it is unsurprising that conviction rates for possession of child pornography have increased in the UK and the US (Carr, 2004).

Limited attempts have been made to understand individuals who possess sexual images of children prior to the advent of the internet (e.g. Lanning and Burgess, in Zillman and Bryant, 1990). More recent research has considered whether internet offenders differ from contact offenders, in terms of demographics and other offence characteristics.

A number of theoretical models offer possible explanations why individuals offend against children (Finkeolhor, 1984; Ward and Siegert, 2002). Finkelhor

argued that there are four essential preconditions for child sexual abuse to occur. The offender must be motivated to offend against the child, overcome internal inhibitions to child sexual abuse, overcome external inhibitions to such abuse, and overcome the child's resistance. The Pathways Model of Child Sexual Abuse (Ward and Siegert, 2002) proposed that an interaction of the following four psychological mechanisms are linked to risk of sexual offending against a child:

1) Intimacy and social skills deficits,

2) Distorted sexual scripts,

3) Emotional dysregulation,

4) Cognitive distortions

Arguably, however, neither of these models are fully able to explain individuals who possess images of children but do not directly offend against them. Finkelhor's (1984) model talks of overcoming a child's resistance, which does not need to occur in the accessing of existing child images, as a third party has already overcome the child's resistance in order to produce the image. However, this can be applicable in other types of online offending, such as contact with children through chatrooms.

The role of cognitive distortions in offending against children, as in Finkelhor (1984) and Ward and Siegert (2002) has been applied to internet offenders also (Taylor and Quayle, 2003). Four categories of cognitive distortions were reported by internet offenders within the research:

Category 1 cognitive distortions involve justification of the offence as they are 'only pictures'

Category 2 distortions justify the offending on the basis that there are a number of other people who access similar images

Category 3 cognitive distortions relate to the images being accessed for the purposes of collecting

Category 4 distortions relate to the images justifying other types of contact with minors, such as online or in real life

There are potential limitations in attempting to classify each offender type into individual models. There is an assumption that there are some inherent differences (e.g. in motivation or beliefs about children) between those who access images of children compared to those who physically offend against children. It is difficult to estimate the number of offenders convicted of a possession type offence who have also committed a contact offence, as there are obvious downsides for someone to admit an offence they have not being caught for. However, Bourke and Hernandez (2009) compared a group of 155 offenders convicted currently of possession offences, some who had solely known possession histories and others who had a known history of contact offences. The individuals were engaged in an offending behaviour programme in a US prison. Prior to attendance of the programme, 115 individuals had no known hands on offences, and 40 had previously committed hands on offences. Following completion of treatment, 131 of the 155 admitted previous contact offending. Therefore, it is possible that many of the individuals classified as internet offenders in the studies discussed in this review may also be contact offenders, and the results of the research must be taken with some caution.

Aims of the review

The present review will look at literature which has compared the demographic and offence related characteristics of internet sex offenders and contact sex offenders.

Terminology

The terms 'internet offender' and 'contact offender' will be used throughout the review. The terms are used in a variety of papers, but do not necessarily refer to the same type of offender throughout. 'Internet offender' will refer to individuals who have committed offences that do not involve any hands on physical contact with a child (when this is clear in the literature). Therefore, 'contact offender' refers to those who have committed offences that do involve physical (sexual) contact with a child. In each paper, it will be highlighted whether the terms they use differ from the broad definitions given here.

Methods

Inclusion and exclusion criteria

Table 1 details the inclusion and exclusion criteria applied to the paper generated by the search terms used in the present systematic review, and also includes a brief rationale for the criterion.

Table 1.

Inclusion and exclusion criteria, and the rationale for these

Criteria	Rationale
The studies must include a sample of internet offenders and contact offenders	The aim of the present review is to look at studies which have compared the two groups.
Quantitative or qualititative methodology	All types of methodology will be considered, as long as the papers compare the two offender types on psychological or offence related variables
Study is comparing psychological/offence related variables	For the purposes of the review, variables relating to possible motivation for offending will be considered.
Peer reviewed	Articles which have been published in peer reviewed journal only will be included, as a systematic review serves to synthesise high quality research findings. The peer review process is viewed as a quality control mechanism for research.
Contact offender group includes those convicted of offences against children	Although it would be preferable to consider only articles which include a comparison group solely of contact offenders against children, as this is an emerging area of research, having such a strict exclusion criteria would result in a reduced number of articles

generated

Searching

Search terms: Sex* offen* AND internet or cyber* or electro* or online AND child* or minor* or infant* or juvenile

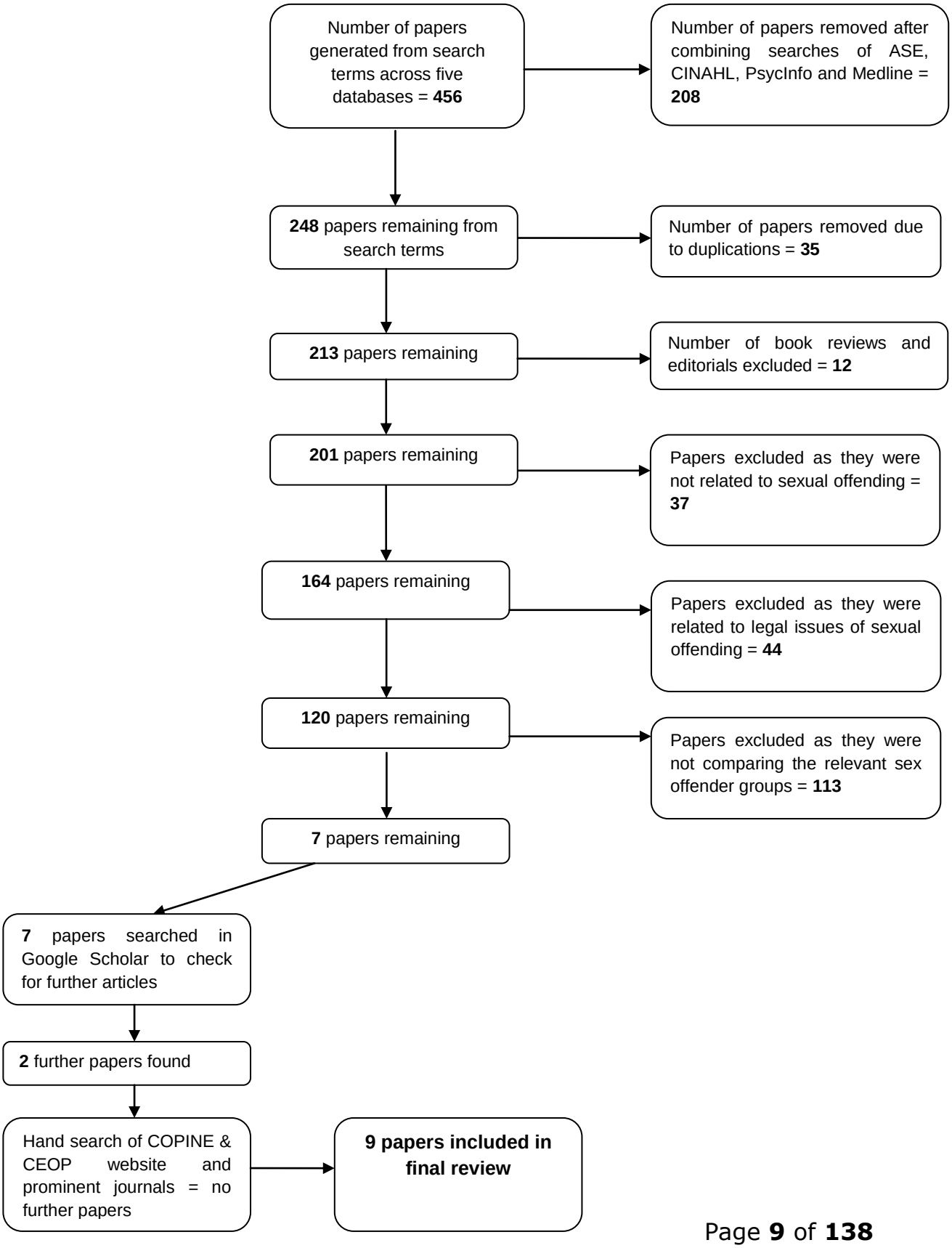
All search terms were entered into PsycInfo, MedLine, CINAHL, Web of Knowledge, and Academic Search Elite. A hand search of prominent journals in this area (Sexual Abuse: A Journal of Research and Treatment; Journal of Sexual Aggression, and Journal of Child Sexual Abuse) was also conducted, with each journal index being access from 2005 to the most recent issue. Abstracts were reviewed in order to further include any relevant articles not generated by the search terms.

The COPINE Project webpage (http://www.ucc.ie/en/equayle/) was also reviewed, to access any further papers on internet usage and child sexual abuse. The COPINE project was established in 1997 in order to research this area. The Child Exploitation and Online Protection Centre (CEOP) is a UK Government service, developed to safeguard children from potential risks online. Publications from both websites were also considered for inclusion.

Following the identification of papers from this, a list was compiled, excluding all duplications. Each article included in this list was then searched in Google Scholar, in order to access further papers which have cited the article.

The search process is shown pictorially in Diagram 1.

Diagram 1. The search process



Results

The final review resulted in nine relevant papers (Table 2). Although some qualitative studies were generated in the search, none of these included a contact offender comparison group, therefore these were excluded. All papers considered used a quantitative methodology, and compared two or three groups. The methodological factors of each paper are considered in Table 3.

Table 4 provides details on the measures used in each study, size of the sample, and a qualititative description of the key findings from the research. As some of the papers include similar offence related variables, these will be critically compared.

Table 2

Studies included in the review

Study number	Authors	Year of publication	Paper title
1.	Bates and Metcalf	2007	A psychometric comparison of internet and non-internet sex offenders from a community treatment sample
2	Howitt and Sheldon	2007	The role of cognitive distortions in paedophilic offending: Internet and contact offenders compared
3.	Webb, Craissati & Keen	2007	Characteristics of internet child pornography offenders: a comparison with child molesters
4.	Sheldon and Howitt	2008	Sexual fantasy in paedophile offenders: Can any model explain satisfactorily new findings from a study of Internet and contact sexual offenders?
5.	Elliot, Beech, Mandeville-Norden, & Hayes	2009	Psychological profiles of Internet sexual offenders: Comparisons with contact sexual offenders
6.	Reijnen, Bulten, & Nijman	2009	Demographic and Personality Characteristics of Internet Child Pornography Downloaders in Comparison to Other Offenders
7.	Tomak, Weschler, Ghahramanlou-Holloway, Virden, Thomas, & Mahsaw	2009	An empirical study of the personality characteristics of internet sex offenders
8.	McCarthy	2010	Internet sexual activity: A comparison between contact and non-contact child pornography offenders
9.	Wall, Pearce and McGuire	2010	Are Internet offenders emotionally avoidant?

Table 3.

Methodological features of the included papers

Feature	**Study 1**	**Study 2**	**Study 3**	**Study 4**	**Study 5**	**Study 6**	**Study 7**	**Study 8**	**Study 9**
Group membership based on all offences	Yes (although two in internet group had previous contact offences)	Yes	No	Yes	No	No	No	Yes	Yes
Contact group are solely convicted of offences against minors	Not stated	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Inclusion/ exclusion criteria stated explicitly	No	No	No	No	Some detail on exclusion re: mixed offences	Yes	No	No	Yes
Sample size rationale given	No	No	No	No	No	No	No	No	Yes
Demographic variables stated	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Matched groups? (4,6 and 8 matched post-hoc)	No	No	No	Age	No	Ethnicity, Treatment Education	Age	Age Marital status, Ethnicity Education, Childhood abuse	Attempted, but not possible due to characteristics of volunteers

Table 4. Characteristics of the studies included in the review

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
1.	Two groups: 1. 39 internet offenders 2. 39 contact offenders From a community sample. Two of the internet group had previously committed contact offences	8 psychometric tests used by the National Probation Service, looking at offence specific information, socio-affectiveness, and validity of responses. The only measure specifically named in the paper is Paulhus' Balanced Inventory of Desirable Responding (BIDR) Offenders are given an overall 'deviancy' rating is given – scores on all questionnaires combined	Deviancy ratings were not significantly different between the internet and contact offenders. Internet offenders scored significantly higher on impression management than contact offenders Contact offenders have a significantly higher external locus of control than internet offenders	N/A
2.	Three groups: 1.16 internet only offenders 2. 25 contact only offenders 3. 10 offenders with internet and contact offences	Children and Sexual Activities (C&SA) questionnaire (developed for study)	Internet offenders scored significantly higher on the 'children as sexual beings' subscale than contact offenders. Contact offenders endorsed more items on the 'dangerous world' subscale than internet offenders.	N/A

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
3.	Two groups: 1. 90 internet offenders 2. 190 contact offenders Sample from London Probation Area	Risk Matrix 2000 (Thornton et al, 2003) **Psychopathy Checklist: Screening Version (PCL:SV, Hart, Cox & Hare, 1995)** Millon Clinical Multi-axial Inventory—III (MCMI-III, Millon, Millon & Davis, 1994) **Stable-2000/ Acute-2000 (Hanson & Harris, 2001)** Follow up data collected on supervision failures, reoffending, drop out and risky behaviours	No significant differences between the two groups on Risk Matrix 2000 scores. Contact offenders rated as significantly higher risk than internet offenders on the Stable 2000. Contact offenders showed higher levels of psychopathy on the PCL-SV than internet offenders. There were no significant differences in MCMI-III profiles, however, contact offenders scored significantly higher on the desirability scale than internet offenders. Contact offenders were breached and recalled more often, missed more supervision sessions and were more likely to drop out of treatment than internet offenders (all significant). Contact offenders displayed significantly more sexually risky behaviours than internet offenders at follow up.	Internet offenders significantly younger than contact offenders, and more predominantly white. Contact offenders reported significantly more physical abuse in childhood than internet offenders. Significantly higher number of internet offenders had previous contact with mental health services. Internet offenders had significantly fewer live in relationships.

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
4.	Three groups: 1. 16 internet only offenders 2. 25 contact only offenders 3. 10 offenders with internet and contact offences. Mostly recruited from a private prison in the UK	Sexual Fantasy Questionnaire (52 item questionnaire developed by the authors)	Contact sex offenders reported having fewer sexual thoughts about female and male children than internet offenders and the mixed group, although this was only significant for female children. Mixed sex offenders reported more sexual thoughts about other males than contact offenders and internet offenders. Contact offenders reported more confrontation/non-contact fantasies than internet offenders.	Contact only offenders had significantly more previous convictions compared to internet only offenders. 84% of contact only offenders employed in manual job. 62% of internet offenders employed in skilled or professional job.

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
5.	Two groups: 1. 505 internet sex offenders 2. 526 contact sex offenders From the UK National Probation Service	Victim Empathy Distortion Scale (Beckett & Fisher, 1994) **Children and Sex Questionnaire (Beckett, 1987)** Short Self-Esteem Scale (Thornton, 1989; Webster, Mann, Thornton, & Wakeling, 2006) **University of California Los Angeles (UCLA) Loneliness Scale (Russell, Peplau, & Cutrona, 1980)** Kingston Sexual Behavior Clinic: Social Response Inventory (Keltner, Marshall, & Marshall, 1981). **Interpersonal Reactivity Index (IRI; Davis, 1980).** **Nowicki-Strickland Locus of Control (Nowicki, 1976).** Barratt Impulsivity Scale II (BIS-II; Barratt, 1994). **Paulhus Deception Scales (PDS; Paulhus, 1998).**	Using univariate F tests, internet offenders were discriminated from contact offenders on the following measures: - Victim Empathy Distortion Scale - Children and Sex Cognitions Questionnaire - Locus of Control - Kingston Sexual Behavior Clinic: Social Response Inventory (over-assertiveness subscale) - Barratt Impulsivity Scale (cognitive subscale) - Interpersonal Reactivity Index (fantasy subscale) Contact offenders "faked good", although scores were adjusted for socially desirable responding.	Internet offenders significantly younger than contact offenders. Contact offenders more likely to have a previous known sexual offence.

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
6.	Three groups: 1. 22 Internet offenders 2. 47 other sex offenders (this group includes people who have offended against children, and people who have sexually offended against adults) 3. 65 non-sexual offenders	Minnesota Multiphasic Personality Inventory – Second edition (MMPI-II; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer; 1989).	No significant differences between MMPI-II scores between internet sexual offenders and contact sexual offenders.	No significant differences between internet and other sex offenders on framework of treatment, age, ethnicity and educational level. Internet offenders significantly younger than other sex offenders. Higher proportion of internet offenders lived alone and had no partner compared to other sex offenders. This group also less likely to have children of their own.
7.	Two groups: 1. 48 Internet offenders 2. 104 general sex offenders (adult and child victims)	Minnesota Multiphasic Personality Inventory – Second edition (MMPI-II; Butcher et al, 1989)	Internet offenders had significantly lower scores on the following scales: - Lie - F scale - Psychopathic deviate There were some within group differences	Internet sex offenders more likely to be Caucasian compared to general sex offenders. Internet sex offenders more likely to be married. No differences between age of sample groups, and some differences in education.

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
8.	Two groups: 1. 56 non-contact offenders 2. 51 contact offenders. All enrolled in sex offender treatment in private practice in US	Six variables: 1. Involvement with child pornography other than possession 2. Using non-pornographic images/stories of children 3. Online sexual contact with children 4. Communicating with others who have a sexual interest in children 5. Involvement with adult pornography 6. Involved in adult sexual contact online Also looked at size of pornography collection, and time spent viewing pornography.	Contact offenders more likely to masturbate to child pornography, and download images of children to medium other than computer hard drive than non-contact offenders. Contact offenders more likely to view non-pornographic websites of children, more likely to talk online to children in a sexual way, send both adult and child pornography to children, and attempt to meet children they had solicited online. Contact offenders more likely to be in contact with other people with a sexual interest in children. Those who had more child pornography than adult pornography were more likely to be contact offenders.	No significant difference in age, ethnicity, marital status, and educational attainment between offender groups. Contact offenders significantly more likely to have a history of drug abuse, have more previous sexual convictions and have a diagnosis of paedophilia.

Study number	Sample	Measures	Key findings	Demographic findings (if applicable)
9.	Four groups: 1. 15 Internet only offenders 2. 18 contact only sex offenders 3. 25 non-sexual offenders 4. 25 non-offenders From UK Probation Service	Emotional Avoidance Questionnaire (EAQ, Taylor et al, 2004) **The Acceptance & Action Questionnaire 2 (AAQ2, Bond, Hayes, Baer, Orcutt, & Zettle, 2007)** Hospital Anxiety and Depression Scale (HADS, Snaith & Zigmond, 1994). **Paulhus Deception Scale (PDS, Version 7, Paulhus, 1998).**	No support for the hypothesis that internet offenders are more emotionally avoidant compared to other groups in the research	Higher percentage of internet offenders with GCSE or higher qualifications compared to contact offenders. Higher percentage of contact offenders unemployed at time of data collection. More internet offenders in intermediate or higher occupations at this time.

Demographics

Seven of the nine reviewed studies made comparisons on the basis of demographic information. There were no emerging dominant features in either of the offender groups, although some significant differences were found between the groups with regards to relationship status. However, this was contradictory, with internet offenders reported to be significantly more likely to be married in one study (Tomak et al, 2009), significantly more likely to live alone, have no partner and no children in another (Reijnen et al, 2009), and have fewer live in relationships in a third paper (Webb et al, 2007). Furthermore, no significant differences in marital status were reported in another paper (McCarthy, 2010).

A similarly unclear picture emerges from the research in relation to education and employment status. Two studies (Reijnen et al, 2009: McCarthy, 2010) reported no significant difference in educational attainment. In other studies internet offenders tended to have higher levels of qualifications (Tomak et al, 2009; Wall et al, 2010), and were more likely to be employed (Wall et al, 2010); and be employed in a more skilled job (Sheldon & Howitt, 2008; Wall et al, 2010).

With regards to previous known sexual offending, the three papers which considered this factor found that contact offenders were significantly more likely to have previous convictions for any type of sexual offending (Sheldon & Howitt, 2008, Beech et al, 2008; McCarthy, 2010). This finding could be explained by the fact that contact offences are perhaps higher risk, and involve an identified victim who is aware of the sexual contact and therefore able to make a formal complaint. However, it cannot be ruled out that the internet groups have previously offended, but have not being caught and convicted of these offences.

Social desirability and impression management

On the MMPI-II, Internet offenders scored significantly lower on the validity scales of 'Lie' and 'Infrequency' (F), which measures unusual responding (Tomak et al, 2009). Similarly, on the MCMI-III, significantly higher scores on the 'desirability' scale were achieved by contact offenders (Webb et al, 2007). Contact offenders also reportedly 'faked good' on the Paulhaus Deception Scale

(PDS), with significant differences in scores on both subscales (impression management and self-deceptive enhancement) compared to the internet group (Elliot et al, 2009), although the effect size is low to medium.

However, on the Paulhaus Balanced Inventory of Desirable Responding (BIDR), a higher percentage of internet offenders (61.8%) scored above the normal range compared to contact offenders (39.5%) on the impression management scale (Bates and Metcalf, 2007). However, a higher percentage of contact offenders scored above the normal range than internet offenders on the self-deception scale.

The reviewed literature does not allow any conclusions to be drawn on whether internet or contact offenders are more likely to present in a way which they believe allows them to be perceived in a more positive light. Both groups have been shown in the literature to respond in a socially desirable way.

A noted shortcoming of self report measures is that measures are transparent and an individual can often 'choose' to respond in a way which they believe is likely to result in a more favourable profile. Three of the papers reviewed (Howitt & Sheldon, 2007; Sheldon & Howitt, 2008; & McCarthy, 2010) did not control for socially desirable responding or impression management, therefore the results of these papers should be considered with caution. Although Wall et al (2010) included the PDS, differences between internet and contact offenders were not reported. The measure was used in covariate analysis of the dependent variables in the study.

Assessments of personality

Contact offenders are more likely to score higher on a measure of psychopathy compared to internet offenders (Webb et al, 2007; Tomak et al, 2009). The use of the MMPI-II to assess differences between personality characteristics of internet offenders and contact offenders (and non sexual delinquents in Reijnen et al, 2009) has so far failed to establish a definitive personality 'type' of either offence group. Specific subscales of the measure have indicated some differences, with internet offenders being distinguishable from non-sexual offenders on the hypomania subscale (Reijnen et al, 2009). Internet offenders scored significantly lower on this scale, which would suggest they have lower

energy and activity levels, and are more withdrawn, compared to the non sexual delinquent group. The 'more withdrawn' component of the scale can perhaps be supported by other studies (e.g. Bates and Metcalf, 2007) who reported higher levels of emotional avoidance.

Tomak et al (2009) did not include a non sex offender comparison group, but did report some differences between internet offenders and contact offenders. On the clinical scales, the internet group scored significantly lower on the schizophrenia and psychopathic deviate scale compared to the contact group. The schizophrenia scale related to unusual patterns of thinking and social alienation, and the psychopathic scale related to anger and rule adherence. Lower scores on this scale suggested an internet offender in this study that is not overly socially isolated, and is able to manage anger and rules. This profile differed from the internet offender group in the Reijnen et al (2009) paper, which suggests a withdrawn and lower activity character,

Similarly, the MCMI-III has not identified different personality profiles of internet and contact offenders (Webb et al, 2007).

Treatment status

Some of the studies included offenders who were currently enrolled in a sex offender treatment programme (Bates and Metcalf, 2007; McCarthy, 2010), whereas others did not explicitly state the treatment status of the participants (Howitt and Sheldon, 2007; Sheldon and Howitt, 2008; Webb et al, 2007; Elliot et al, 2009). Only one study excluded individuals who had received treatment, as the completion of a treatment programme may lead to a change in reported attitudes (Wall et al, 2010).

Locus of control

Two studies reported that contact offenders were significantly more likely to report an external locus of control than internet offenders (Bates and Metcalf, 2007; Elliot et al, 2009). A person with an external locus of control is viewed as more likely as seeing events as being beyond their control. Therefore, it could be that contact offenders would endorse cognitive distortions relating to children being able to initiate and enjoy sex with adults, and it being the fault of others when they are caught.

Cognitive Distortions

Contact offenders are reportedly more likely to endorse cognitive distortions relating to the justification of their sexual offending against children (Bates and Metcalf, 2007; Elliot et al 2009). They are also more likely to endorse the 'Dangerous World' implicit schema (Ward and Keenan, 1999), suggesting that they see relationships with children as being safer than relationships with adults, and see professionals as out to get them (Howitt and Sheldon, 2007). It is possible that this relates to the findings on locus of control.

Internet offenders, however, are significantly more likely to endorse statements related to the 'Children as Sexual Beings' implicit schema (Howitt and Sheldon, 2007). This would suggest that internet offenders are more likely to believe children can enjoy sex, and even initiate it. However, this would appear to contradict the research into locus of control, which would suggest that internet offenders are less likely to see events as being caused by others.

Self esteem

The findings in the reviewed literature on self esteem are inconsistent. Internet offenders had higher levels of self esteem compared to contact in Bates and Metcalf's (2007) study, however, no difference was reported by Elliot et al (2009).

Emotional loneliness and avoidance

Emotional avoidance differs in that it suggests that the internet is a way of avoiding experiencing emotions, whereas emotional loneliness would suggest that internet use develops as a way of coping with an inability to relate to adults. Again, the assessment of differences in emotional loneliness between offence groups is not clear. Internet offenders reported higher levels than contact in one study (Bates and Metcalf, 2007), but there was no significant difference between the offender groups included in Elliot et al (2009). There were no reported differences in emotional avoidance profiles between internet and contact offenders (Wall et al, 2010).

Assertiveness

Contact offenders were reported to be more likely to respond in an over-assertive manner compared to internet offenders on the Short Self Esteem Scale (Elliot et al, 2009). Similarly, levels of under-assertiveness were higher in internet offenders than contact offenders (Bates and Metcalf, 2007).

Personal distress

In terms of personal distress, that is the ability to cope with negative feelings of self and others, no consistent profile is established, with one study reporting no significant difference between internet and contact offenders (Elliot et al, 2009), and another reporting that internet offenders have lower levels than contact offenders (Bates and Metcalf, 2007). This finding could be related to offending behaviour, as it may be that internet offenders viewed themselves as less able to cope with the possible feelings they would experience after offending against a child, and less able to cope with the feelings that are exhibited by the child who is offended against.

Fantasies

Two studies have considered the differences in fantasy endorsement between internet and contact offenders. The Fantasy scale of the Interpersonal Reactivity Index (IRI) looks at how able an individual is to identify with fictional characters. Internet offenders were reportedly more able to do this than contact offenders (Elliot et al, 2009). The Sexual Fantasy Questionnaire (Sheldon and Howitt, 2008) is a 52 item scale investigating frequency of a number of normal and deviant fantasies. The most frequently reported fantasies were about consensual relations with adult females. Contact sex offenders had fewer fantasies about female and male children, compared to internet and mixed offender groups. Fantasies related to specific genders were linked to gender of victim in previous offending.

Using a least significant differences (LSD) post-hoc test, contact offenders reported more fantasies related to exposure and making sexual telephone calls (confrontational non contact fantasies) than internet offenders.

Empathy

In the reviewed literature, contact offenders reported significantly more victim empathy distortions than internet offenders (Elliot et al, 2009; Bates and Metcalf, 2007). This would suggest that they are less likely to identify any harm caused by their offending. Given that internet offences often have a more anonymous, disparate victim, this finding is perhaps surprising, and would merit further research.

Risk

One study has looked at the difference between internet and contact offenders in terms of risk (Webb et al 2007). Contact offenders were rated as significantly higher risk than internet offenders on the Stable 2000, an actuarial risk assessment; however, there were no differences on the Risk Matrix 2000, and the Acute 2000 between the two groups. The differences on the Stable 2000 related to contact offenders having more difficulties with complying with supervision, and holding attitudes condoning sexual assault. This was supported by the collection of follow up information on the offenders, as contact offenders were significantly more likely to breach conditions and be recalled, miss supervision appointments, and drop out of treatment. They also displayed a significantly higher level of sexually risky behaviours than internet offenders.

Internet use

Contact and internet offenders have been compared on their access and involvement with sexual activity on the internet (McCarthy, 2010). Contact offenders were surprisingly more likely than internet offenders to masturbate to child pornography, and, perhaps unsurprisingly, they were more likely to attempt to meet children they had established a relationship with online. Contact offenders had larger child pornography collections than internet offenders.

The findings of this study appear incongruous, and it can perhaps be hypothesised that as self report measures were used, with no attempt to control for impression management and desirable responding, internet offenders perhaps felt that there was a greater risk in admitting to more than they had already being convicted for.

Discussion

The current research on the differences between internet and contact offenders has not yet yielded a typical psychological profile for each offender type. Much of the research discusses the heterogeneity within each of the groups (e.g. Tomak et al, 2009). This heterogeneity indicates that it may not be possible to achieve such a profile. Use of established personality assessments has suggested some differences between the groups, but these are inconsistent, and often not seen from study to study.

In the reviewed research, contact offenders were rated as higher risk than internet offenders on the Stable 2000 (Webb et al, 2007), and also engaged in more risky behaviours. However, there were no differences in RM-2000 scores, despite contact offenders having more previous convictions, although the measure has not yet being validated with an internet sex offender population (Webb et al, 2007). Internet offenders will often be found in possession of in hundreds or thousands of images of children, but this will only result in one conviction. Therefore they may have fewer convictions, but more offences than contact offenders. At present, their risk appears qualitatively different to that of contact offenders, and risk measures should endeavour to reflect that.

Contact offenders were more likely to present themselves in as socially desirable way than internet offenders (Webb et al, 2007; Elliot et al; 2009; Tomak et al, 2009), although internet offenders achieved higher impression management scores on the BIDR in one study (Bates and Metcalf, 2007). It is possible that contact offenders aim to present themselves in a more socially desirable way for a number of reasons; possibly to allow them to 'groom' children for the purposes of offending, or possibly as a post hoc development, which allows them to attempt to lead professionals into believing that they are a lower risk of re-offending, thus reducing length and conditions of sentence. The latter could also apply to internet offenders. This further highlights the need for measures which are immediately less transparent than self report measures.

Increased desirable responding may have had an impact on the responses to the psychometric assessments used in the research. Indeed, this may have been the case, as when compared with a study which did control for 'faking good' (Elliot et al, 2009), and included a number of similar assessments, different results were

found. Bates and Metcalf (2007) reported differences between contact and internet offenders on measures of self esteem, emotional loneliness, and personal distress, which were not seen in the Elliot et al (2009) study. The latter study also had a much larger sample size (1031 compared with 79). Therefore, it is possible that when a larger sample is analysed, internet and contact offenders cannot be distinguished on the afore-mentioned characteristics.

However, the research by Elliot et al (2009) only assigned offenders to each group based on index offence, whereas in the study by Bates and Metcalf (2007), the offenders were categorised using all known previous offences. Arguably, the groups in the Elliot et al (2009) consist of more mixed offenders, convicted of both types of offences against children, which may go some way to explaining why no differences were found with regards to the afore mentioned characteristics.

Contact offenders were thought to be more assertive than internet offenders, and were more likely to have an external locus of control (Bates & Metcalf, 2007; Elliot et al, 2009). Further research into assertiveness could investigate whether this characteristic is related to the commission of hands-on offences (e.g. do contact offenders feel more able to assert their needs over the needs of the victims, whereas internet offenders feel less able to do this in 'real life?').

Although the existing research does not yet present a convincing picture of differences in the offending behaviour of the two groups, two studies have highlighted that these two groups may not be as distinct as initially thought. Following completion of treatment, an offender group which previously consisted of 40 known contact offenders became a group with 115 offenders admitting to hands on contact with a child (Bourke and Hernandez, 2009). An exploration of internet usage of contact and internet offenders actually found that contact offenders possessed more images of children, and were more likely to masturbate to this imagery, as well as being more likely to access non-pornographic websites of children. Therefore, assigning offenders to groups for comparison based on index offence (or even pre-convictions) is no guarantee that each group consists of offenders only of that type. Indeed, it seems highly unlikely that this would be the case. Some studies categorised participants on index offence alone (Webb et al, 2007; Tomak et al, 2009; Elliot et al, 2009;

Wall et al, 2010), whereas others considered pre-convictions (Bates and Metcalf, 2007; Howitt and Sheldon, 2007; Sheldon and Howitt, 2008; McCarthy, 2010). However, , we are unable to establish whether there were overlaps in group assignment, and it is possibly that many participants would not disclose unknown offending even after treatment. A reliance on self report measures to establish this means that honesty must be presumed, perhaps falsely.

The lack of firm explanation of differences between offender groups currently only highlights the need for further research. If it is known that contact offenders and internet offenders use child pornography, why do contact offenders also offend in a hands on fashion, but internet offenders do not (presuming that this is the case)? With regards to the studies looking at cognitive distortions, contact offenders endorse more statements allowing them to justify their offending (Bates and Metcalf, 2007; Elliot et al, 2009), but internet offenders are more likely to view 'children as sexual beings' (Ward and Keenan, 1999) who can consent to and enjoy sex (Howitt and Sheldon, 2007). If internet offenders hold such a view, it is unclear why they do not also engage in contact offences. This highlights the current difficulties in understanding cognitive distortions (e.g. existing schemas, or post-hoc justifications of offending) using self report measures.

Overall, the findings from the reviewed studies cannot yet offer much to the development of typologies of internet offenders, although the area is growing. There are limitations in the review also, as only studies which compared internet and contact offenders were included. It is possible that there is literature on internet offenders only and contact offenders only which would be comparable, and further research could explore this. Some measures used (e.g. the RM 2000) were not designed for an internet population, but by presuming that this makes the assessment irrelevant for the group, presumes that there are significant differences in this group, which have not been demonstrated to date.

Also, not all of the reviewed papers included solely offenders against children in their contact group (e.g. Tomak et all, 2009). There is evidence that people who offend sexually against adults differ from people who offend sexually against children in terms of emotional maturity, self esteem, levels of intimacy in

relationships, and social functioning (see Shechory & Ben-David, 2005, for summary). Further analysis of this data would benefit the literature.

The differences between the offence groups on assertiveness, locus of control and cognitive distortions is an area for further consideration by researchers, although an awareness of impression management issues in both groups should be considered, either by adjusting responses for this, or using a measure that does not rely on self report by the offender . This is a developing area, with implicit measures being used to measure cognitive distortions in sexual offenders (e.g. Milhailides, Devilly & Ward, 2004; Dawson, Barnes-Holmes, Gresswell, Hart & Gore, 2009). Similarly, further research should carefully consider the division of offenders into each group, as the current reviewed research appeared to highlight more differences between groups when previous convictions were considered (e.g. Bates & Metcalf, 2007, compared to Elliot et al, 2009). However, an awareness of the negative outcomes of admitting to previously undetected offending should be considered, as it is unlikely that full offending histories will be known due to this.

There is a recognised need for further research into this area, with two lines of enquiry appearing relevant. Firstly, as the number of convictions for internet offending increase, understanding factors relating to offending is important to treatment providers who seek to reduce the risk of re-offending. Secondly, the review has highlighted that the existing measures used to measure offence related characteristics are self-report, and therefore the well reported issues with self report measures apply. More implicit measures of assessment should be used with these groups in order to investigate differences without the possibility of desirable responding and impression management.

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Thesis Abstract

Introduction: There are a number of theories proposed in order to attempt to understand the behaviour of sexual offenders. A common theme that they all cover is that of the impact of thoughts and beliefs on behaviour. However, existing measures of cognitions are explicit in their nature and therefore easy to respond to in a socially acceptable way. There has recently been a move towards using implicit measures in order to increase "honest" responding to overcome this. Such measures have been utilised with sex offenders, in order to empirically investigate the process of offending as proposed by a number of theories. There is as yet no universally accepted explanation of the beliefs that sexual offenders hold about children, whether they are pre-existing and inform offending, or develop after offending in the context of justifying behaviour. The present study aimed to investigate the role of the post-offending context in the presence of 'implicit beliefs' using the Implicit Relational Assessment Procedure with staff who work with offender relating to children and sex.

Method: The Implicit Relational Assessment Procedure (IRAP, Barnes-Holmes, Barnes-Holmes, Power, Hayden, Milne & Stewart, 2006) was administered to 20 staff who work with sex offenders from the UK Probation Service, asking them to respond to Child-Sexual stimuli. The same measure was also administered to a non-offender control group (n=20) with no experience of working with sex offenders for the purposes of comparison. An explicit measure (Cognitive Distortion Scale, Gannon, 2006) was also completed by both groups.

Results: The control group were unable to discriminate between children as being sexual or non sexual on the IRAP, whereas the staff group responses indicated that they view children as the opposite of sexual. The CDS results converged with the IRAP, with the control group scoring significantly higher on this measure than the staff group.

Discussion: The results indicate that there is an impact of context on beliefs about children, and also that the presence or non-rejection of child-sexual relations is not necessarily indicative of a sexual offender. The results may also suggest some methodological issues with the IRAP, which are discussed.

Statement of contribution

The trainee contributed to the following areas of the research:

- Design of the project and subsequent amendments
- Seeking ethical approval from the relevant bodies
- Recruitment of participants
- Data collection,
- Data extraction and scoring
- Data entry and analysis
- Writing the journal and extended papers

The project was supervised by Dr David Dawson, who provided a great deal of supportive, encouragement and guidance to the trainee, and proved particularly invaluable in helping the trainee access participants, reading draft versions of all research submissions, and assisting the trainee during a change of project. I am grateful to him for having faith in my ability to complete the thesis, and the constructively challenging supervision he has provided.

Many thanks go to all the course staff who have marked my research submissions, your critiques have assisted me in improving my project throughout the process.

Journal Paper

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Abstract

There has recently been a move towards using implicit measures in order to increase honest responding, particularly when measuring socially unacceptable attitudes. Such measures have been utilised with sex offenders, in order to empirically investigate the process of offending as proposed by a number of theories. There is as yet no universally accepted explanation of the beliefs that sexual offenders hold about children, whether they are pre-existing and inform offending, or develop after offending in the context of justifying behaviour.

The present study aimed to investigate the role of context in developing 'implicit beliefs' using the Implicit Relational Assessment Procedure with staff who work with offenders. The results suggest that staff respond to 'child-sex' stimuli in a frame of opposition, whereas control group were unable to discriminate between children as being sexual or non-sexual. An explicit measure utilised converged with the IRAP, suggesting that there may be some methodological issues, which are discussed

Keywords: *implicit beliefs; cognitive distortions; sexual offending; Implicit Relational Assessment Procedure*

1. Introduction

The use of implicit measures of cognition within forensic psychology domains has become increasingly popular, with numerous studies demonstrating the utility of these methods (which are more resistant to social desirability biases and faking) over and above traditional measures. Due to convenience, however, the vast majority of these studies have primarily focussed on the implicit cognitions of *convicted* sexual offenders. It is therefore unclear whether the differences identified in these individuals post-offence are indeed related to their offending behaviour in a causal manner, or are simply an artefact of the post-offence therapeutic context, in which concepts such as 'child' and 'sex' are frequently paired. In order to explore potential contamination effects of sex offender therapy, the implicit sexual beliefs of treatment facilitators were examined and compared to a non-offending, non-professional control group. These findings are discussed in relation to previous and on-going IRAP research.

Individuals who work therapeutically with sex offenders against children are placed in a context where they are exposed to detailed narratives of these offences. The present study is concerned with how exposure to detailed offence accounts, and explanations put forward by the offender for their behaviour impacts on how staff members respond to stimuli about children and sex. It is possible that the beliefs proposed as unique to sex offenders against children are also observable in other individuals with no offending history, or indeed, 'offending future'.

Theories of sexual offending against children will be considered, in order to discuss how the link between beliefs and behaviour is given prominence in these theories. Attempts at measuring beliefs in sexual offenders against children will then be critically appraised, with a focus on the move towards the application of implicit measures. The impact of working with this group on staff members is then introduced, before the possible clinical implications of the study are described.

1.1 Cognitive Distortions

Cognitive distortions in relation to sexual offending against children are defined as beliefs that legitimise or justify sexual activity with children (Abel, Becker &

Cunningham-Rathner, 1984). There is ongoing debate about whether cognitive distortions are reflective of underlying beliefs that motivate offending against children (e.g. Ward & Keenan, 1999), or whether they are developed post-offence and serve to justify the sexual act against a child (Abel et al., 1984).

1.1.1 Cognitive distortions as underlying beliefs

Ward and colleagues (e.g. Ward, 2000, Ward & Keenan, 1999) have investigated how underlying schema or implicit beliefs/ theories may be responsible for the cognitive distortions that sexual offenders against children appear to hold when discussing their offences. Implicit theories are similar to scientific theories, which are tested and used to make predictions about the world, and the behaviour of others (Ward and Keenan, 1999). They also bias the processing of information, in that information which supports the individual's implicit theory will be accepted, whilst contradictory information is rejected. The authors proposed five implicit theories thought to underpin cognitive distortions in sex offenders against children, which are discussed in section 5.1.1 of the extended paper. Of interest in the present study is the 'children as sexual objects' implicit belief. Ward and Keenan (1999) suggested that individuals with this implicit theory hold the belief that people (including children) are motivated by sexual pleasure. Also, children have specific desires and beliefs about sex, and are capable of making an informed decision about engaging in sexual activity. Behaviour that is normal child-like behaviour is proposed to be interpreted as sexual by the offender in the model. Cognitive distortions associated with such an implicit theory may be "she is flirting and teasing me, so she wants to do it" (pg. 828, Ward & Keenan, 1999).

1.1.2 Cognitive distortions as defences

Disorted beliefs can be developed post-hoc to allow the offender to justify why they have violated the recognised and accepted norms of society, and why they may continue to do so (Abel et al, 1984). In one study of cognitive distortions (Gannon, 2006), a bogus pipeline procedure was used in order to attempt to increase honest responding in participants on a questionnaire. Participants in this condition did not endorse a significantly higher number of distorted beliefs. It was suggested that the results could indicate that most cognitive distortions exist as post-hoc rationalisations, as the offenders may have wanted to justify

their offending, but did not feel they could do so when the honesty of their responding is being tested. The study is discussed in more detail in section 5.1.2 of the extended paper.

Ward has recently considered other possible theoretical explanations relating to cognitive distortions (Ward & Casey, 2010). Extended Mind Theory (Menary, 2007) is a cognitive approach, which considers the external environment as important in shaping cognitions, as well as biological and neural components. The theory proposes that cognitive distortions are flexible, and can be shaped by different contexts and experiences, which is a move away from the explanation postulated by the Implicit Theories (Ward & Keenan, 1999) model. More information on this theory is included in section 5.1.3 of the extended paper). The acknowledgement of the influence of context and environment on the presence and maintenance of cognitive distortions/ beliefs is not new. Relational Frame Theory (RFT, Hayes, Barnes-Holmes and Roche 2001) posits a similar idea from a behavioural perspective. This approach will be discussed further (see Section 1.4).

1.2 Theories of sexual offending against children

Numerous theories have been proposed to attempt to understand what would motivate an individual to commit a sexual offence against a child. These are distinct from models of sexual offending with adult victims (although attempts to explain all variations of sexual offences have been proposed, e.g. the Integrated Theory of Sexual Offending, Ward & Beech, 2006), as research has shown that sex offenders with adult victims differ from sex offenders with child victims on a number of factors, such as higher levels of aggression (Shechory & Ben-David, 2005) in the adult victim group, and fear of intimacy and close relationships in the child victim group (Ward, & Hudson, 1996). Sex offenders with child victims have also been found to have higher levels of cognitive distortions related to their offending (Bumby, 1996; Blumenthal, Gudjonsson & Burns, 1999).

A common factor in the theories proposed to explain sexual offending against children is that the beliefs held by the individual are functionally related to their offending behaviour. Researching this area in sex offenders with child victims presents a difficult task, as it is not possible to identify whether a belief held by the offender was present before they committed the offence, or whether it

developed afterwards as a response to the context of being convicted and identified as a sexual offender (Howitt & Sheldon, 2007).

The following models demonstrate the theoretical relationship between cognitive distortions and offending and are discussed in more detail in section 5.2 of the paper:

1. Precondition Model of Child Sexual Abuse (Finkelhor, 1984)
2. Integrated Theory (Marshall & Barbaree, 1990)
3. Quadripartite Theory (Hall & Hirschman, 1991)
4. Pathways Model of Child Sexual Abuse (Ward & Siegert, 2001)

1.3 Measuring Beliefs and Cognitive Distortions in Sex Offenders

When working with people convicted of sex offences against children, assessing beliefs and change in sexual offenders related to their offending and victims has traditionally depended on the use of explicit measures. However, this has proved problematic due to the transparent nature of self report methods, in a group that is likely to attempt to conceal their motivation to offend (Gray, Brown, MacCulloch, Smith & Snowden, 2005). Phallometric assessment has been applied to this group as an alternative, but the potential to fake responding to this has also been demonstrated, particularly in offenders who have completed a phallometric assessment previously (Harris, Rice, Chaplin & Quinsey, 1999). For more discussion on methods used to measure beliefs in sexual offenders, please see section 5.3.

The difficulties identified in using a transparent method to assess the cognitions of a sex offender group highlight a need for measures in which it is more difficult for the offender to "fake good." Faking good is clearly a concern if questionnaires are used as a tool to evaluate progress in offending behaviour programmes which aim to reduce the risk posed by a convicted sex offender. As a result, measures have evolved in an attempt to capture the implicit beliefs of sex offenders that deviate from the traditional use of a questionnaire, and focus more on attentional processes.

1.3.1 Implicit Measures

The term 'implicit social cognition' was introduced by Greenwald & Banaji (1995) to describe cognitive processes that occur outside of conscious awareness, and relate to social constructs such as attitudes and self-concept. Implicit measures were proposed as a way of investigating such constructs, as traditional measures would not be able to capture these. The accuracy of self-report measures is variable, and does not necessarily assess processes implicated in a particular behaviour (Nosek, Hawkins & Frazier, 2011). Self-report can be affected by motivation (a possible factor for sex offenders), opportunity to respond (which can be constrained by the assessment measure), ability or limits in awareness (Wilson & Brekke, 1994). A number of implicit measures have thus been developed in an attempt to investigate implicit social cognitions and overcome the limiting factors of explicit measures. A review by Nosek et al (2011) identified twenty implicit measurements, which have been cited over 6000 times in Google Scholar. The measure with the most citations at the time of the study is the Implicit Association Task (IAT; Greenwald, McGhee, & Schwartz, 1998),

1.3.2 The Implicit Association Task

The IAT has been utilised to explore cognitions on a number of broad topics, including sexual offending. Broadly, the procedure aims to assess implicit beliefs by associating a target concept with an attribute. An early study by Greenwald et al. (1998) asked participants to pair either a) flowers and insects, or b) weapons and musical instruments with the attribute of 'pleasant' or 'unpleasant' who asked college students to rate a list of words on a five point scale of pleasantness). Latencies in responding are recorded, as they are postulated to provide a measure of automatic evaluation of the stimulus. Faster response latencies equate to the stimuli being associated with each other in memory, whereas slower responding indicates the stimuli are less closely associated. The IAT procedure has proved more effective than questionnaires when investigating "socially sensitive" beliefs, such as attitudes towards homosexuality (Banse, Seise & Zerbes, 2001), and attitudes towards different racial groups (Dasgupta, McGhee, Greenwald & Banaji, 2000).

1.3.3 Critique of the IAT

The IAT procedure has been criticised on the premise that it focuses on presumed associations rather than relations between stimuli (De Houwer, 2002)

The IAT measures the relative strength of pairs of associations, and does not give information about the direction or strength of associations.

It has also been reported that it is possible to fake the IAT. Kim (2003) tested this by informing participants of a strategy to fake the IAT, and found that this group were able to reverse the IAT effect. Similarly, Boysen, Vogel and Madon (2006) researched public and private administration of the IAT to measure views on homosexuality. They found that participants expressed significantly lower bias towards homosexuality in the public administration, suggesting that it was possible to conceal attitudes when there was a concern that they were not private.

1.3.4 The Implicit Relational Assessment Procedure

The Implicit Relational Assessment Procedure (IRAP) was developed by Barnes-Holmes, Barnes-Holmes, Power, Hayden, Milne and Stewart (2006) in order to attempt to address the limitations of the IAT. The IAT method is grounded in cognitive theory, and the implicit attitudes measure by the task are thought to represent automatic judgments or actions made without the individual's conscious awareness (Greenwald & Banaji, 1995). The theory behind the IRAP, however, understands this process in a behavioural framework, therefore ideas such as mental representation are disputed (Hughes, Barnes-Holmes & DeHouwer, 2011). The IRAP measure is based on ideas from Relational Frame Theory (RFT; Hayes et al., 2001). A specific model is proposed in order to interpret the IRAP effect in terms of RFT, the Relational Elaboration and Coherence model (REC, Barnes-Holmes, Barnes-Holmes, Stewart & Boles, 2011).

1.4 Relational Frame Theory

RFT is a behavioural approach to understanding language and cognition. It both builds upon and offers a critique of Skinner's (1957) work on verbal language (Gross & Fox, 2009).

Relational responding can be formed even without direct learning experience (Hayes et al., 2001), and classes of relational responding are known as relational frames, and can take a number of possible forms (Roddy, Stewart & Barnes-Holmes, 2010). Stimulus equivalence is formed based on the contextual cue of the word "is", and multiple examples of reinforced responses to stimuli which are

the same, but may take different forms (e.g. a picture, written word and spoken word; Roddy et al., 2010). It is proposed that only verbally able humans can demonstrate stimulus equivalence (Barnes, McCullagh & Keenan, 1990). Stimuli can also be framed in other relational frames, including a frame of opposition ("is not"), or a frame of comparison (Barnes-Holmes, McHugh & Barnes-Holmes, 2004). For more discussion around different types of relational responding in RFT please refer to section 5.4 of the extended paper.

1.5 The Relational Elaboration and Coherence Model

The Relational Elaboration and Coherence (REC) model offers an explanation of the implicit-explicit distinction in the IRAP, and builds upon the ideas from RFT (Barnes-Holmes et al., 2011). The IRAP effect is postulated to reflect immediate relational responses, whereas explicit measures such as questionnaires measure extended, more elaborate and coherent relational networks. There is divergence between the two types of cognition when initial responses do not converge with more elaborate relational responding, and in such cases, initial responses are often rejected when other relevant relational networks produce a preferred response (for example, when the immediate response would not be viewed as pro-social and would therefore reflect badly on the individual if communicated). Initial relational responses can also be consistent with other relevant networks, therefore convergence can also occur.

Although the REC model offers a plausible explanation of the IRAP effect, the authors state that further research is required to test its assumptions (Barnes-Holmes, Murphy, Barnes-Holmes, & Stewart, 2011).

1.5.1 The IRAP method

The IRAP differs from the IAT due to its use of relational terms (e.g. better, similar etc) to measure specific beliefs or networks. Both tasks are computer based, and researchers utilising these methods are interested in the difference in response latency between the consistent and inconsistent trials, however the IAT asks participants to categorise stimuli into two groups, whereas the IRAP asks participants to respond to four different stimulus relations (Roddy, Stewart & Barnes-Holmes, 2010).

On the IRAP, participants are required to respond to stimuli in a way that may be consistent or inconsistent with their existing verbal relations. The hypothesis

is that participants will respond faster when presented with relational stimuli concordant with their existing beliefs and slower when required to provide a response that is incompatible with previously held beliefs. The magnitude of the difference in response latencies between the 'consistent with beliefs' and 'inconsistent with beliefs' trials is compared and is considered to provide a metric of their most previously reinforced beliefs (Hayes et al, 2001). For an explanation of the first IRAP study (Barnes-Holmes et al, 2006), please refer to section 5.5 of the extended paper.

1.6 The use of implicit measures with sexual offenders

The IAT has been applied to a sample of sex offenders in a number of research studies (e.g. Brown, Gray, & Snowden, 2009; Mihailides, Devilly, & Ward, 2004) and has shown that sex offenders demonstrate stronger associations when presented with stimuli about children and sex than controls. More discussion on its application to this group is presented in section 5.6.

The IRAP has been applied to a sample of sexual offenders against children on one occasion to date. (Dawson, Barnes-Holmes, Gresswell, Hart, & Gore, 2009). The researchers aimed to investigate whether the IRAP methodology could provide evidence for Ward and Keenan's (1999) implicit theory of 'children as sexual beings.' The method involved presenting the category of 'adult' or 'child' with one of two sets of target stimuli (sexual and nonsexual) across four trials. The IRAP was also compared with Gannon's (2006) Cognitive Distortion Scale (CDS). It was hypothesised that the IRAP would be more effective in discriminating offenders from non-offenders than the CDS. Although both groups demonstrated a bias towards adults as sexual and the non-offenders discriminated children as non-sexual, offenders demonstrated no such bias towards children as sexual or non-sexual. Also, the offender group scored lower than the non-offender group on the CDS, further highlighting the shortcomings of the questionnaire method.

The above studies demonstrate the application of implicit measures to stimuli related to children and sex with some interesting results. As yet, an implicit methodology has not been utilised to investigate the potential of relating or associating these stimuli with a group with only indirect exposure accounts of sexual offending (e.g. staff members working with people who have sexually offended against children). The present study is interested in how working with

sexual offenders who have child victims may impact on how child and sex terms are related.

1.7 The Role of Context in Beliefs

Research into cognitive distortions of people who have sexual interactions or sexual attraction towards children is invariably carried out with people who have been charged or convicted of an offence against a person under the age of 16 (e.g. Mihailides et al., 2004; Dawson et al., 2009). Because the act has been committed, it is not possible to establish whether cognitions are pre-existing, and played a role in the commission of the offence, or whether these are employed post-hoc in order to maintain post-offence self-esteem and minimise dissonance.

When an offender is sentenced, it is likely that they will participate in a sexual offending behaviour programme, with the aim to lower their risk of re-offending. Again, this is another context where the offending behaviour is explored, and explanations for the behaviour are sought. In this setting the offender also has access to the thoughts and beliefs of other offenders relating to their own convictions. Sex offender treatment programmes tend to include a cognitive element designed to modify "distorted" thinking towards more pro-social beliefs, such as not viewing a child's behaviour as flirty or seductive, enhancing understanding about the harm to the child caused by the offence, and issues around consent (Brown, 2006). It therefore follows that if implicit beliefs can be modified from distorted to pro-social because of the components involved in treatment, the reverse can also occur. From hereon, the term 'implicit beliefs' perhaps does not adequately explain the phenomenon being researched, and use of the term will be used interchangeably with related terms, "thoughts" or "frames", which is more in line with an RFT perspective on exploring the formation and maintenance of cognitions. Further exploration of the role of context on beliefs is included in section 5.7.

1.8 The Impact of Working with Sex Offenders

The impact of working with sex offenders has been researched previously, but much of the research has focused on the emotional impact (e.g. Farrenkopf, 1992; Kadambi & Truscott, 2003) and vicarious traumatisation (McCann & Pearlman, 1990) of such work. Exposure to traumatic accounts can impact on a person's existing schemas and core beliefs, as a person is exposed to events and

opinions that contradict their world view and sense of safety (McCann & Pearlman, 1990). Cognitive theories of PTSD (Brewin, 1996) suggest that how a person appraises the level of threat is key in trauma development and maintenance. Indeed, it is possible to apply more of Ward and Keenan's (1999) implicit theories to the development of trauma, such as 'Dangerous World' and 'Uncontrollability.'

Research considering the cognitive impact is limited, and has tended to be related to the impact on the therapist's interpersonal relations e.g. thoughts about intimacy with others (VanDeusen & Way, 2006) or the impact of training on attitudes towards sex offenders (Hogue, 1994). More recently, the idea of exploring the psychological impact of viewing images of children being sexually abused has been proposed (Edelmann, 2010). Please refer to section 5.8 for more information.

1.9 Clinical implications of the study

The present study has a number of possible clinical implications for the following groups:

1) Staff working with sex offenders with a conviction against children – the present research aims to consider whether working with people who have sexually offended against children has an impact on how this group views children and sex. The research could highlight a need for more specific staff training and supervision to allow the staff member to process the impact this may have on their personal and professional life.
2) People who have sexually offended against children – the outcome of the study may have an impact on theories of sexual offending which focus on beliefs as being a key component of offending (e.g. Ward & Keenan, 1999), if children and sex terms are related by either of the two groups, as this would indicate that this is not a pairing that is exclusively made by people who have sexually offended against children.

2 Method

2.1 Aims

The aim of the research is to investigate the utility of the Implicit Relational Assessment Procedure to identify the differences in responding to stimuli from Ward and Keenan's (1999) 'children as sexual beings' implicit belief between two groups: staff who have at least one year's experience of working with people who have committed sexual offences against children, and a control group who have never worked with people who have committed sexual offences against children. The research will also compare the IRAP with a version of the Cognitive Distortion Scale (CDS, Gannon, 2006, see Appendix G), a 13 item questionnaire which aims to measure endorsement on the 'children as sexual beings' implicit belief.

2.2 Hypotheses

1. There will be a significant difference between the responses on the IRAP between the staff group and the control group. Given the lack of research into the impact on working with sexual offenders with child victims on cognitions to date, there is nothing to suggest a specific direction of difference, but it is hypothesised that the staff group will be faster to respond to child-sex pairings given that they are exposed to these pairings within their work.
2. There will be no significant difference between the groups on the explicit (CDS) measure in line with previous research comparing explicit and implicit measures, as responses will be mediated by extended and elaborated relational networks.

2.3 Design

To answer the primary hypothesis, a between participants design was used, comparing two groups (see section 2.4 for a description) and both of the measures. A within participants design was used to answer the secondary hypothesis, as all participants were tested on both measures and the differences between a) each group on each measure and b) between each the IRAP and the CDS were analysed. Within the IRAP, each participant was also tested on two trial types: consistent and inconsistent (see section 2.6 for explanation).

Ethical approval was granted by the University of Lincoln Ethics Committee. For a more detailed discussion of the ethical issues involved in the study, please refer to section 6.2.

2.4 Participants

There were 40 participants in total in the study. For information on how sample size was calculated, please see section 6.3

The staff group (n = 20) consisted of individuals who were currently working in Lincolnshire Probation Trust as Probation Officers. The group consisted of 15 females and five males, with an average age of 38.6 years (range of 28 – 54 years). They had worked with people who had sexually offended against children for at least 12 months. The average amount of time spent working with sex offenders was 6.5 years (range 3 -13 years). They were recruited via a Programmes Officer working within the service who had links with the University of Lincoln and had previously assisted with research.

The non-staff group (n = 20) were recruited via the Psychology department from the student population at the University of Lincoln, and via opportunity sampling. The average age of the group was 28.8 years (range 18 – 57 years). The group consisted of 14 males and six females. All participants declared that they had no history of working with people who had sexually offended against children, and had no history of sexual offences against children.

Participants all spoke English as their first language, and had normal or corrected to normal vision.

Inclusion and exclusion criteria can be found in section 6.4 of the extended paper.

2.5 Materials

2.5.1 Cognitive Distortion Scale

The Cognitive Distortion Scale (Gannon, 2006) was used. The measure was adapted from the Opinions Questionnaire, a 100 item measure looking at opinions on offending, devised by the Offending Behaviour Programmes Unit. Gannon used 14 cognitive distortion questions from the scale, which were agreed by external judges to represent Ward and Keenan's (1999) 'children as sexual beings' implicit theory. Therefore, it is appropriate to use this questionnaire in the current study as an explicit measure of the 'children as

sexual beings' implicit theory. However, items were excluded, as independent raters in Gannon's study felt that they measured other implicit beliefs proposed by Ward and Keenan (1999). Figure 4 in the extended paper lists the 13 items which participants were asked to respond to on a Likert Scale of 0 (strongly disagree) to 4 (strongly agree).

2.5.2 The Implicit Relational Assessment Procedure

The IRAP (Barnes-Holmes et al, 2006) was administered using a portable HP laptop. The IRAP software is freely available online (available from http://irapresearch.org/downloads-and-training/). The stimulus set used (table 1) was taken from the Dawson et al (2009) study, who developed the stimulus set to reflect Ward and Keenan's (1999) children as sexual beings implicit theory. There were four overarching possible combinations of the two category labels (Adult and Child) and two target stimuli (Sexual and Nonsexual) – Adult-Sexual, Adult-Nonsexual, Child-Sexual and Child Nonsexual.

Table 1

The Stimulus Set for the IRAP

Sample 1: Adult Relational Term 1: True	Sample 2: Child Relational Term 2: False
Target words consistent with adult	Target words consistent with child
Sexual	Non-sexual
Flirty	Non-flirty
Seductive	Non-seductive
Arousing	Unarousing*
Erotic	Non-erotic
Sexually aware	Sexually unaware

*Dawson et al (2009) noted that although this word is not found in an English dictionary, pilot testing indicated that it was semantically equivalent to "not arousing."

2.6 Procedure

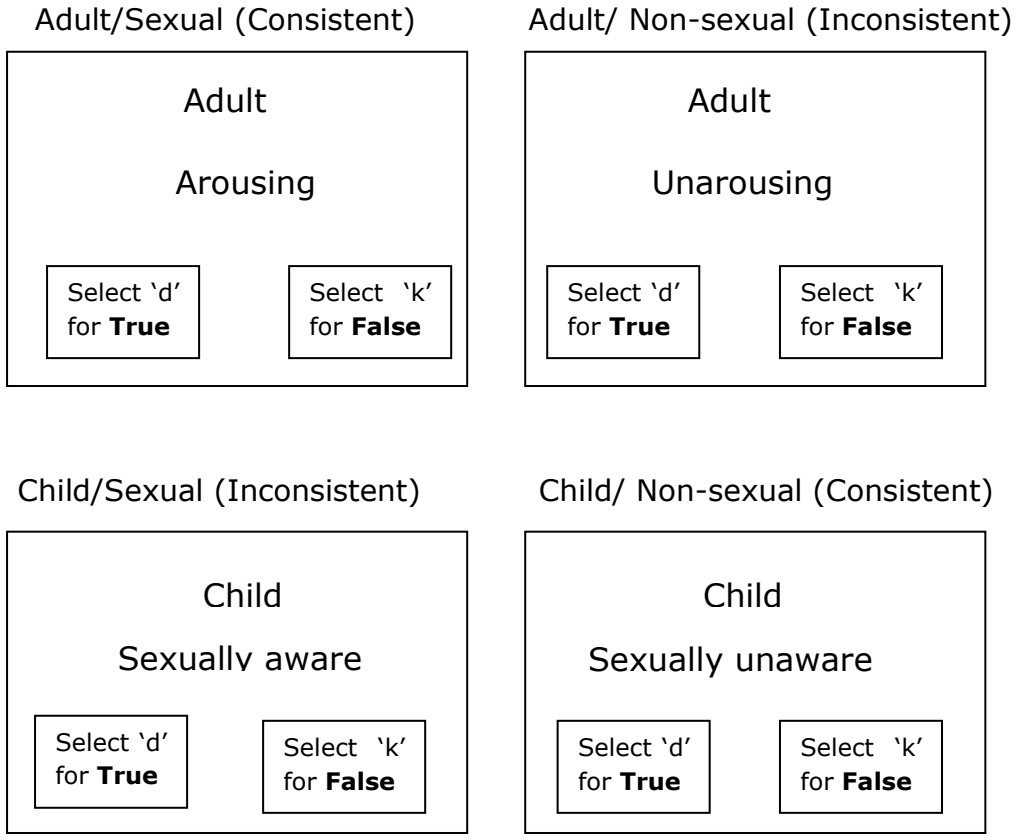
All participants completed the IRAP first, followed by the CDS and the demographic questionnaire (Appendix F). More information on the IRAP procedure is included in section 6.5.1 of the extended paper. Visual instructions were presented on screen on how to complete the IRAP. Participants were instructed that sometimes they would be required to respond in a way that reflects what they believe, whereas on other trials, they were required to respond in a way that may oppose their beliefs. An 'X' would appear on screen if they responded incorrectly.

The stimuli were presented to participants as detailed in Figure 1. A category label (Child or Adult) was presented at the top of the screen, with one of the 12 stimulus words presented below it. The response choices were presented in each of the bottom corners (true or false). Participants identified the pairing as 'True' by pressing the 'd' key with their left index finger, or 'False' by pressing the 'k' key with their right index finger. Participants were instructed to keep their fingers on the 'd' and 'k' keys respectively, for the duration of each block of trials. Correct responses moved the task forward to the next set of paired stimuli, whereas incorrect responding resulted in a red 'X' being presented to the participant. In this case, the participant was expected to then select the correct response before moving on to the next pair of stimuli, which were presented after a gap of 400ms.

Following completion of a block, an instruction appeared on the screen to inform participants that they were to respond the opposite way in the next block.

Figure 1

Screenshots presented to participants



The IRAP offers a fixed number of practice trials, to ensure that participants understand the task. Each practice block consisted of 24 trials. Practice blocks were paired, in that a participant had to complete a consistent and an inconsistent block within the set criteria before progressing. During each practice block, participants were asked to match two categories (Adult or Child) with either a sexual word, or an opposing non-sexual word (see table 1). The 12 target words were presented in a quasi-random sequence, with each word presented twice, once with each target category. Participants completed a minimum of two and a maximum of eight practice blocks before commencing the experimental stage, which consisted of six test blocks. In order to progress to the test block stage, participants must have achieved an accuracy rating of over 80% and a mean response time of less than 4000ms on each pair of practice blocks (consistent and inconsistent).

The six test blocks followed the same pattern as the practice blocks. All participants commenced on a Consistent trial, followed by an inconsistent trial. The stimuli were presented as in Figure 1.

For a discussion on the reliability and validity of the CDS and the IRAP, please see section 6.6 of the extended paper.

3. Results

3.1 The D-IRAP

The latency scores from the IRAP measure were transformed using an adapted version of the D-algorithm from Greenwald, Nosek and Banaji (2003). Transforming the data with the D-algorithm reduces the impact of individual differences such as cognitive ability, age and motor skills (Greenwald et al, 2003). The D-IRAP algorithm is in Table 2.

Larger D-IRAP scores indicated a greater difference in response latency between consistent and inconsistent trials. D-IRAP scores can be positive and negative, with positive scores indicating responding with pre-experimentally defined biases and in line with broader social norms (Adult Sexual, Child Nonsexual), and negative scores indicating the opposite (Child Sexual, Adult Nonsexual). Scores that are not significantly different from zero indicate no discrimination between adults or children as sexual and nonsexual.

3.2 Normality

The data for each trial type (Adult Sexual, Adult Nonsexual, Child Sexual, Child Nonsexual) and the CDS were checked for normality using SPSS. Please see section 7.1 of the extended paper for information on how this was carried out and the subsequent transformations that were completed.

Table 2

The Method for Transforming Raw Latency Scores to D-Implicit Relational Assessment Procedure (D-IRAP) Scores (from Vahey, Barnes-Holmes, Barnes-Holmes, & Stewart, 2009).

Step	
1	Use only test-block data.
2	Eliminate latencies above 10,000 milliseconds from the data set.
3	Remove all data for a participant if 10% of the test-block response latencies are less than 300 milliseconds.
4	Calculate 12 standard deviations for the four trial-types: 4 for the response latencies from Test Blocks 1 and 2, 4 from the latencies from Test Blocks 3 and 4, and a further 4 from Test Blocks 5 and 6.
5	Calculate 24 mean latencies for the four trial-types in each test block.
6	Calculate difference scores for each of the four trial-types, for each pair of test blocks, by subtracting the mean latency of the consistent test block from the mean latency of the corresponding inconsistent test block.
7	Divide each difference score by its corresponding standard deviation from Step 4, yielding 12 D-IRAP scores, 1 score for each trial-type for each pair of test blocks.
8	Calculate the four overall trial-type D-IRAP scores by averaging the three scores for each trial-type across the three pairs of test blocks.
9	Calculate an overall relative D-IRAP score by averaging all 12 trial-type D-IRAP scores from Step 8.

3.3 IRAP results

A mixed between and within subjects analysis of variance (2x4 ANOVA) was carried out on SPSS, in order to determine whether there was a main effect for each of the independent variables (group and trial type), and whether the interaction between group and trial type is significant. Therefore, the analysis looks at whether group membership impacts on D-IRAP scores for any of the four trial types. Table 3 shows the means and standard deviations for the D-IRAP scores, and Graph 1 shows the mean D-IRAP scores in both groups by trial type. Higher D-IRAP scores equal a greater difference in response latencies between adult sexual and child sexual trials.

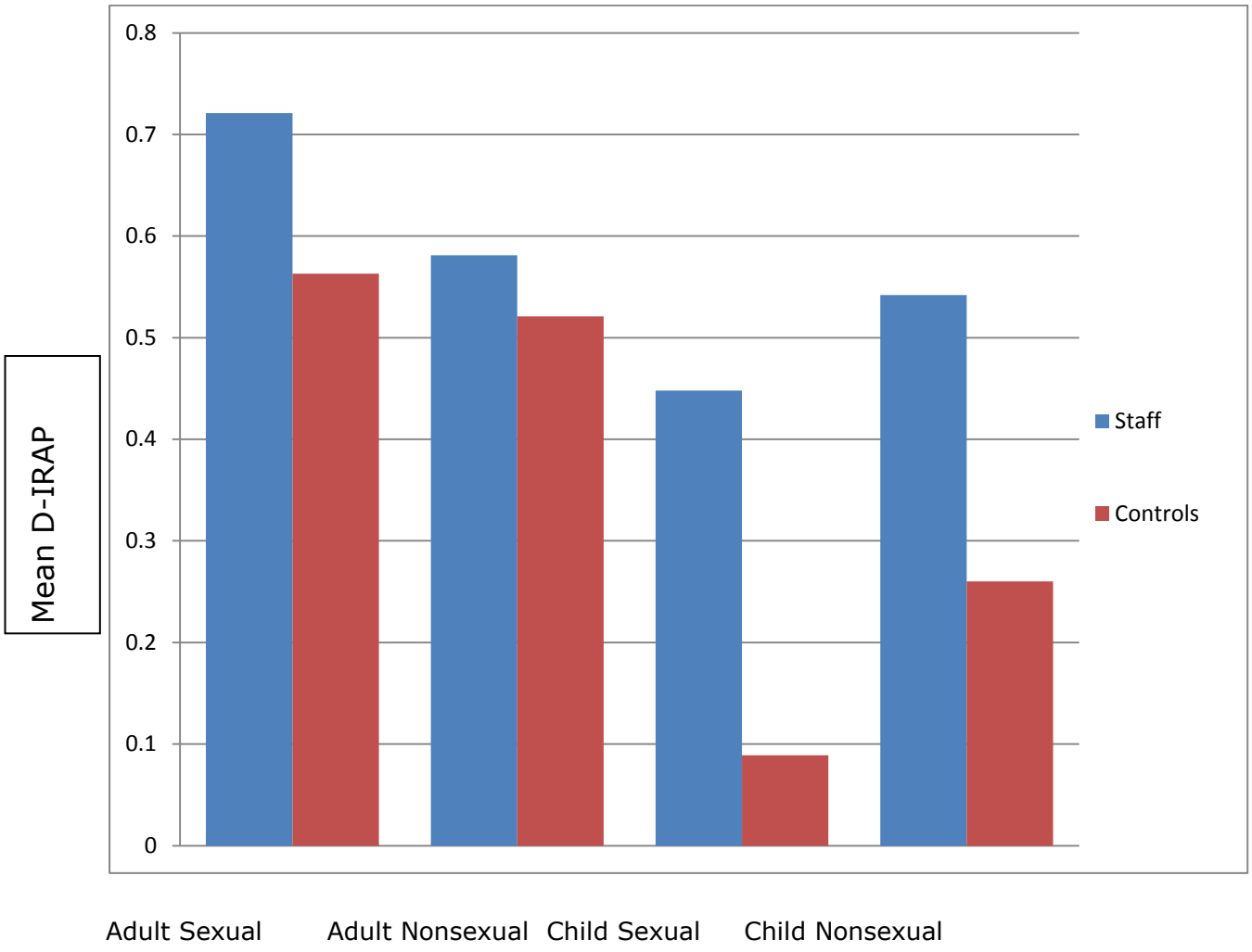
Table 3

D-IRAP Mean and SDs for Group and Trial Type

Trial Type	**Staff mean**	**Staff SD**	**Control mean**	**Control SD**
Adult Sexual	0.721	0.487	0.563	0.593
Adult Nonsexual	0.581	0.523	0.521	0.404
Child Sexual	0.448	0.495	0.089	0.501
Child Nonsexual	0.542	0.630	0.260	0.512

Graph 1.

D-IRAP means by group and trial type



There was no significant interaction between trial type and group, Wilks Lambda = .923, F (3, 36) = 1.01, p = .401, partial eta squared = .78. There was a main effect for trial type, Wilks Lambda = .67, F (3, 36) = 5.98, p = .002, partial eta squared = .33. There was a significant effect of group membership, F(1,38) = 3.04, p =0.048, partial eta squared .07, suggesting a difference between the two groups on the IRAP trial types.

A one way between groups analysis of variance was conducted to compare the IRAP trial types to group membership .There was a statistically significant

difference at the $p < .05$ level for the Child Sexual trial type, $F(1,38) = 5.17$, $p = 0.29$, indicating that the control group demonstrated a significantly smaller bias towards children as sexual compared to the staff group.

In order to compare whether the D-IRAP scores for each trial type were significantly different from zero, a series of single sample T-tests were also completed, a score that is not significantly different from zero indicates a lack of significant response bias in either direction. All trial types are significantly different from zero for both groups, barring the Child Sexual D-IRAP for the Control group. This result indicates that the control group discriminate children as sexual against nonsexual less than the professional group.

3.4 Cognitive Distortion Scale

The control group scored higher on the CDS ($M = 6.5$, $SD = 5.4$) compared to the staff group ($M = 2$, $SD = 2.6$). As the data was shown to be not normally distributed, a non-parametric test (Independent Samples Mann-Whitney) was chosen to explore the difference between the two groups. The difference between the mean scores from each group was significant at the .001 level. This result demonstrates that the control group responded to more items related to children being sexual.

Please see section 7.2 of the extended paper for information on the analysis of age and gender.

4. Discussion

The findings from the present study suggest that the implicit beliefs of individuals who work with sexual offenders differ significantly to individuals who do not work in such roles. Specifically, these individuals found the task of relating sexual words to children significantly more difficult, in terms of the group's higher overall response latencies on the IRAP compared to non-professional controls. In line with our initial hypothesis this finding would indicate that there is an effect of job role on responding to stimuli that links children and sex, as there was a significant effect found for group on the IRAP.) The non-professional group did not always discriminate between children as sexual and non-sexual, whereas the staff group demonstrated a bias against the framing of children as sexual This was further supported by the significant

difference between CDS scores, with the non-professional group scoring higher than the staff group, although this poses some questions about the methodology, which will be considered later. Working with sex offenders on a daily basis for a number of years (all staff in the study had worked in this role for at least 3 years) seems to have had an impact on relational responding.

It was hypothesised that the 'Child-Sexual' trial type would be faster responded to by the Probation staff group than the control group, as there is a constant pairing of these phenomena in treatment, which it was predicted would have increased saliency, given the discussion about the role of context on relational responding introduced in section 1.6. The present results indicate that these terms were related for the Probation staff group, but in a frame of opposition rather than co-ordination (Barnes-Holmes, Barnes-Holmes & McHugh, 2004). Essentially, the results demonstrate that the staff group seem to hold a strong response against 'Child-Sexual' trial types. This can perhaps be explained by their specific learning experiences, such as training that focuses on challenging beliefs and assumptions in sex offenders about children and sex, and their exposure to the specific and graphic details of offences, as opposed to the broader notion of 'children and sex' purported by society that the control group are exposed to.

4.1 Theoretical Implications and Considerations

The current research adds to the debate about the role of context when measuring implicit beliefs and how stimuli may be related. The results are particularly interesting in the context of previous research using implicit tasks (Brown et al., 2009; Dawson et al., 2009) which has indicated that convicted sex offenders against children related 'Child' and 'Sexual' terms more readily than a control group of non-offenders. However, in the context of the ongoing debate on cognitive distortions and whether they are a core component of the offending process or simply post-hoc rationalisations, the current study offers some possible insights. The ability to faster relate 'Child – Sexual' terms in previous research (Dawson et al., 2009) may have been an artefact of the process of being arrested, convicted and subsequently offered intervention for an offence, which creates a learning environment that associates children and sex, or a pre-existing belief that has motivated an individual to offend. The results in the present study, with the professional group demonstrating a bias against children

as sexual, indicates that the terms 'children' and 'sexual' are not just related faster because of exposure to a treatment context, as if this was the case it may be expected that the professional group in the present study respond in a similar way to the sex offender group in the Dawson et al. (2009) study. However, the present study results do not suggest that cognitive distortions are pre-existing, but rather highlight the need to further consider the different processes implicated in delivering and receiving treatment.

The Dawson et al. (2009) study considered the impact of treatment on the responses of the offender group (all of who had completed or were currently in treatment), and found that the number of treatment sessions did not have a significant impact. As the staff group in the present study would have been exposed to a similar type of treatment, but from a facilitator perspective, this perhaps is indicative of the wider number of 'Child' and 'Sexual' relations the offenders are exposed to, perhaps due to their assumed sexual preference, and also as an artefact of the offences they have actually committed. The offender group in the Dawson et al. (2009) study also demonstrated an overall response bias towards adults as sexual, and children as nonsexual. This could be reflective of their participation in treatment, in that it created a context where the salience of those relations was heightened compared to prior to this. With regards to IRAP research on treatment outcomes with substance users, it has been proposed, that cognitive behavioural and motivational interviewing based therapies may build upon pre-existing negative beliefs (about drug use), rather than develop new beliefs, or modify positive beliefs (Carpenter, Martinez, Vadhan, Barnes-Holmes & Nunes, 2012). The same ideas about treatment could also apply to sex offenders against children, as it is likely that this group will already have some negative beliefs about their offending formed from direct and indirect experience, for example negative feedback from the victim (direct) and societal attitudes to people who sexually offend against children (indirect), therefore sex offender treatment works by bringing these negative beliefs to the fore. Further research looking at the differences between treated and untreated sex offenders would add to the literature on context and belief formation.

It was hypothesised that 'Child-Sexual' relations would have been more salient for the staff group given the increased frequency of 'Child-Sexual' pairing in the environment they work in. However, the results of the current study suggest

that the environment does not create a faster response to 'Child – Sexual' terms for the staff group, in fact an opposite result was apparent. Although the experience of delivering sex offender treatment programmes, completing risk assessments etc is not directly comparable to being a participant in a group, the context is similar for both groups, and there are elements that overlap (e.g. the content that is delivered). What is different is the background that both parties bring to the context, and the interpretations they make during the process of treatment.

The importance of contextual learning, such as negative thoughts and feelings when hearing offence accounts, training in programme delivery, and subsequent supervision seemingly creates a powerful learning experience in the context of the findings of the current research, which has led to the professional group developing a bias against children and sexual stimuli. The staff group responses appeared to indicate an attempt to distance themselves from the beliefs and explanations offered up by the offenders. The utility of the IRAP in this study means that it is possible to discriminate the relation between child and sexual (children are definitely not sexual for the professional group), rather than just identify that the two are associated as the IAT would. Limitations of the IAT are discussed in section 1.3.3, but with regards to the present study, if an IAT methodology had been applied, the findings would have indicated that the professional group associate children and sexual terms less than the non-professional control group, but it would not have been possible to say whether this would mean that the control group had a bias towards children and sexual stimuli, with the staff group showing no bias, or whether the control group showed no bias and the staff group biased against the relating of children and sexual terms.

4.2 Working with sex offenders

Sex offender treatment programmes in the UK (e.g. SOTP; Grubin & Thornton, 1994) include a cognitive element to address cognitive distortions and beliefs related to offending (Fisher & Beech, 1999). This process of challenging cognitive distortions is described as a necessary and direct procedure in getting the offender to account for their behaviour by Bond (2006), who investigated

clinician's descriptions of their experiences as sex offender therapists. Staff in the study discussed their role in confronting sex offenders' cognitive distortions as necessary, and those who do not confront offenders fully are doing the offender and the community a disservice. As one participant stated "Right is right, and if he doesn't do right, then I get on him" (pg 70; Bond, 2006). This indicates that for some people, there may not be the possibility for shades of grey when working with people who have sexually offended against children. To effectively confront, and thus reduce risk, boundaries have to remain firm. The victim is innocent, and the offender is guilty. It is likely that the context of delivering such strong message about the offender's distortions being entirely false and harmful has impacted on the results found in the present study.

The research into vicarious traumatisation in people working with sex offenders would appear to suggest that working in this environment has an impact on how staff members view not only the offenders they work with (Farrenkopf, 1992), but also other people who perhaps have no sexual intentions towards children (Hatcher & Noakes, 2010). These views may explain the present results, as children are firmly in a frame of opposition with sexual terms, which suggests an impact of working with this group that perhaps erodes views on children and sex that are present in non offender groups, which are discussed further in the following section. For more discussion on vicarious traumatisation please see section 8.2 of the extended paper.

However, it cannot be ruled out that there perhaps a similar IRAP score profile may have been found in the staff group prior to the commencement of therapeutic work with group. It is possible that people who choose to work with people convicted of sexual offences against children have pre-existing ideas about the sexuality of children, and thus select a career that compliments these ideas. It may be useful to carry out further research using the IRAP methodology to assess people at the commencement of their employment in such a service, and also following core training, after delivering a complete sex offender treatment programme etc.

4.3 Implications for the Implicit Theories Model (Ward & Keenan, 1999)

If 'Child-Sexual' statements are endorsed, or at least not opposed by a normal population, as indicated by the results of the present study and other literature on sexuality of children (e.g. Friedrich, Fisher, Broughton, Houston & Shafran, 1998), establishing what is different about sex offenders in terms of action and behaviour is still not clear. Models of offending all propose beliefs as being important, but clearly the idea of 'children as sexual beings' as understood by the Implicit Theories model (Ward & Keenan, 1999), and EMT (Ward & Casey, 2010) is not specific enough, and is unlikely to be exclusive to offenders given the above research. The present results suggest that such a belief can exist in a context where sexual offending does not occur; therefore contexts not related to an individual's offending (e.g. an individual's experience of their own sexuality as a child, observations based on the behaviours of children) can result in the development and maintenance of this belief. Post-hoc explanations of cognitive distortions are also not able to account for this finding, as they tend to only discuss the presence of such beliefs/thoughts in a known sex offender group, and the development of them in response to being asked to account for their offence. Similarly, it is proposed that the sexual nature of children is not necessarily what appeals to all offenders, for example some are attracted to the innocence and the potential to exert power over a victim (Seto, 2008). This motivation for offending would perhaps be partially accounted for by the 'entitlement' implicit theory (Ward & Keenan, 1999), although this would still only be a partial explanation as the vast majority of "entitled" people do not act on this sense of entitlement by sexually offending against children.

Further discussion on the current study and past research into the sexuality of children is presented in section 8.3 of the extended paper.

4.4 Conceptual issues

4.4.1 The REC Model

The present study aimed to partially replicate the IRAP study with offenders carried out by Dawson et al. (2009). The target stimuli remained the same, but the response latency was reduced from 5000ms in the original study to 4000ms in the present study. In the Dawson et al. (2009) study, the results on the 'Child Sexual' trial type for the non-offender group were similar to the staff group in the present study. One possible explanation of this may be related to response

latencies, and the REC model (Barnes-Holmes et al, 2010) which offers a theoretical explanation of the IRAP effect.

The REC model proposes that when the stimuli are presented to a participant, an immediate relational response is generated even before the participant has physically responded to the task. As this immediate response is determined by the participant's learning history, the consistent trials will be responded to more quickly than the inconsistent trials, which involve an element of overriding the immediate response. However, if a participant is given more time to respond, it is possible that what the results are then capturing are extended relational responses (ERR), which are more akin to the responses usually found on explicit measures, where an individual has had time to modify their initial response before answering. Therefore, it is possible that the IRAP outcomes in the Dawson et al. (2009) study were either extended relational responses or a mixture of brief and elaborated responding, rather than solely immediate relational responses, and that the difference of 1000ms may have been crucial in determining what was captured by the measure.

However, the response latencies used in IRAP studies are varied, and as yet there is no recommended latency time which will assure with some certainty that immediate relational responses are being recorded by the IRAP. Some studies have used 1000ms (Barnes-Holmes et al, 2010), others have used 2000ms (Nicholson & Barnes-Holmes, 2011), whereas IAT studies recode data over 3000ms to this figure (Teige-Mocigemba, Klauer & Sherman, in Gawronski & Payne, 2010). The recoding of data in the IAT in this way could lead to ERRs being counted as immediate relational responses which is therefore not measuring what the tool sets out to measure. There is some preliminary data which suggests that shorter response latencies appear to increase reliability in the IRAP (e.g. Barnes-Holmes et al., 2011)

4.5 Cognitive Distortion Scale

The responses on the Cognitive Distortion Scale would be expected to reflect a participant's extended relational responding, which is expected to be more likely to be modified by perceived expectations and social norms. The CDS results in

the present study converged with the 'Child-Sexual' trial type results, with the non-professional control group scoring significantly higher on this measure than the professional group. The scores for the CDS are consistent with the professional group being sensitised to the non-sexual nature of children, as higher scores indicate endorsement of a greater number of statements about children and sex. Similarly, the context of completing the measure at work and knowing about the stigma of endorsing any such statement may have impacted on honest responding.

The control group produced relatively high scores, which was similar to the control group of non-offenders in the Dawson et al. (2009) study.

4.6 Context

The tasks were administered in the work place for probation staff, so there is the possibility of a recency effect, if, for example, they had ran a group session challenging cognitive distortions prior to completion of the task, or had been working with an offender giving an offence account, as these would likely be in the participant's recent learning history and thus impact on immediate relational responding.

Comments were made by a number of participants from both groups relating to the potential of being viewed as a 'paedophile.' It is possible that people were mindful of not wanting to respond in the same way as someone convicted of offences against children would, either because of their job role or their ideas about people who commit such offences, and wanting to distance themselves from this group as much as possible. The professional group may have also been cautious because of the measures being completed at their workplace. Research into the use of the IRAP to assess racist beliefs in public and private contexts found that IRAP scores were not impacted upon by context, but the explicit measures also used in the study were, with participants expressing more pro-white, anti-black attitudes in the private administration context (Barnes-Holmes et al. 2011). Therefore, it is possible that the workplace context of the study for the staff group may have resulted in decreased "honest" responding, which may have explained the low scores on the CDS in the staff group.

Further discussion on conceptual issues is in section 8.2 of the extended paper.

4.7 Future research

Although specific recommendations for future research and methodological refinement have been addressed within relevant parts of the discussion, a number of general suggestions are presented here.

Given the methodological differences between the present study and the Dawson et al (2009) study, there may be some utility in comparing offenders and the staff who work with them in order to make direct comparisons of responses to 'Child Sexual' trials, on both the IRAP and the IAT, as in the present study the IRAP was able to determine that 'Child-Sexual' beliefs are related in a frame of opposition for the professional group. Prior to this, it would be perhaps useful to validate IRAP responses to the same trials with a non offender, non staff population, given the differences between the control groups in the two studies. It was hypothesised that the staff group would respond faster to child-sexual relations, but this was not found. It is possible however, that this would more likely be found by use of the IAT, where repetition of stimulus pairing regardless of how they are paired (similar – opposite) would perhaps show an effect that could be seen as supporting what was hypothesised.

Future IRAP studies may also benefit from the newer addition to the IRAP in more recent papers (e.g. Nicholson & Barnes-Holmes, 2011),where participants are informed if they are responding in a way that is too slow for the purpose of measuring basic and immediate relational responses. However, as previously mentioned, this must be balanced with ensuring that the response latency does not make the IRAP impossible to complete.

As the term 'child' covered a wide range of ages, the use of pictures, or giving participants a particular age to consider (e.g. aged 4 versus aged 15) would provide more stimulus control and allow more clarity when interpreting the results, particularly with a group of non-offenders. It is not possible to know what age either group in the present study were thinking about when responding, therefore further definition may provide useful information relating to views about the sexuality of children in society.

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5. Extended Introduction

5.1 Cognitive distortions as underlying beliefs

5.1.1 Implicit Theories (Ward & Keenan, 1999) model.

The remaining implicit theories as proposed by Ward & Keenan (1999) are as follows:

1) Entitlement – The model proposes that offenders view some people as more superior to others, and those that are superior are permitted to assert their needs against those they perceive to be inferior. People who sexually offend against children are thought to see their needs as paramount, and subsequently view the needs of the children as irrelevant or secondary. It is the individual's right to have sex with the child. A cognitive distortion associated with this implicit theory is "children are supposed to do what I want to serve my needs" (pg. 829, Ward & Keenan, 1999).

2) Dangerous World - Other people are viewed as dangerous by the offender and will act in their own best interests. Therefore, the model proposes that the offender believes it is important to fight back and achieve dominance over others, particularly those who pose a perceived threat (although it is unclear what threat a child is postulated to pose to an offender). Adults are proposed to be viewed as unreliable and children as reliable, therefore, an offender's need to be cared for and accepted can only be met by a child. For example, someone with this implicit theory may generate cognitive distortions such as "some kids like sex with adults because it makes them feel wanted and loved" (pg. 830, Ward & Keenan, 1999).

3) Uncontrollability – The offender is proposed to view the world as fundamentally uncontrollable. The individual who holds such an implicit theory is hypothesised to articulate beliefs that his/her sexual desires are not their fault; in fact, the offender is blameless because of the uncontrollability of the world. A cognitive distortion associated with the uncontrollability implicit theory is "I can't control myself, so I'm not responsible" (pg. 831, Ward & Keenan, 1999). Cognitive distortions

attributing blame on previous abuse suffered as a child are also proposed to be generated from this implicit theory.

4) Nature of harm – The model proposes that in the view of the offender, there are degrees of harm, with sexual activity viewed as beneficial and therefore unlikely to cause anyone any harm. The offender can think that although they did x, they did not do y, which they perceive as being more harmful to the child (although a critique of this model is that such statements could be post-offending justification rather than a pre-existing belief leading to offending behaviour), for example stating that "we are only touching, this isn't really sex" (pg. 832, Ward & Keenan, 1999). The offender may argue that, with relation to the 'children as sexual objects' theory, that people are intrinsically sexual; thereby children want to have sex, for example Any distressing effects of the offending (e.g. impact on the child) are explained by the offender as being the result of other factors, such as society's opinion of adults who have sex with children. Ward and Keenan (1999) viewed this theory as more secondary, likely to interact with any of the other four.

However, it is possible that some individuals may hold all of these beliefs, but do not act on them, and that people may see children as being sexual in their behaviours, but do not interpret this as an invitation to offend against them (e.g. Friedrich et al., 1998). Also, research has shown that not all men showing deviant sexual attraction towards children do actually offend against them (Seto, 2008). In summary, the model proposes that there is a link between beliefs and behaviour, but this may not be the case. Similarly, there is not an acknowledgement that behaviour can shape beliefs, the interaction between the two is more likely to be circular than causal, with other contextual factors modulating the presence of the behaviour also (Hayes & Wilson, 1995).

However, more recently Ward has acknowledged that there is not yet evidence to support the notion that implicit theories are pre-existing and guide behaviour (Ward and Casey, 2010). He argued that the content of the model is valid, but as yet it has not been possible to demonstrate how these theories distort information processing, and thus impact on behaviour. See section 5.1.3 for more discussion around this development.

5.1.2 Cognitive distortions as defences

In one study of cognitive distortions (Gannon, 2006), participants attempts to 'fake good' on an explicit measure (questionnaire) when they believed they were attached to a lie detector was assessed. The participants, who were all convicted of sexual offences against children, completed a cognitive distortion questionnaire (developed to map on to Ward and Keenan's (1999) implicit theory of 'children as sexual beings') and a social desirability questionnaire. A bogus pipeline approach was adopted, in order to make the participant believe that incorrect responding would be detected. This approach involves providing the participant with false information that the ('bogus') device they are connected to is in fact a sophisticated lie detector, in the hope that this will provide a 'pipeline' to their true beliefs. Both participant groups were initially asked to complete the questionnaires without the bogus pipeline attached at Time One. At Time Two, one week later, one group of participants (n = 18) completed the questionnaire with the bogus pipeline. The control group (n =14) completed the same measures, but were not attached to the bogus pipeline.

The results were opposite to what was predicted: participants in the BP condition did not endorse a significantly higher number of distorted beliefs, both compared to their own Time One scores, and to the control group in the study. Gannon (2006) postulated that the BP condition may have increased social desirability, as the awareness of participants is heightened to the importance of the self report measures, and the level of scrutiny the response will come under.

5.1.3 Extended Mind Theory of Cognitive Distortions

As introduced in section 1.1.2, Ward has recently considered other possible theoretical explanations relating to cognitive distortions (Ward & Casey, 2010). Extended Mind Theory (Menary, 2007) is a cognitive approach, which considers the external environment as important in shaping cognitions, as well as biological and neural components. Ward and Casey (2010) applied this theory to the development and maintenance of cognitive distortions in sexual offenders against children and proposed four key ideas of this approach:

1. Cognitive distortions involve internal and external processes, and are dynamic and context dependent. Cognitions develop in response to a particular problem or situation, and can be 'soft' and exist only in particular contexts, or they are enduring and are applicable across

contexts over an extended period of time. The flexibility of cognitive distortions is supported by the research literature (e.g. Gannon & Polsachek, 2006), and is to be expected, as EMT rejects an internalist view of cognitive practices and adopts a context based view (which is a shift from the implicit theories approach). The model proposes that the context of research into sexual offending can shape the availability or otherwise of cognitive distortions related to offending, for example a neutral research setting is identified as being very different from a setting where the offender is offering a narrative of his or her account, in terms of the context, what is discussed, and what is being asked of them at that specific time.

The model proposes that the origin of such cognitions is grounded in developmental experiences, learning history and how the offender interprets these events. However, this account offers no specific mechanisms for the development of beliefs related to sexual offending.

2. Environment and context of the offender are a significant cause of distorted thinking, and are also an outcome of distorted thinking. EMT proposes that to fully understand the nature of cognitive distortions, attempts should be made to integrate the offender's internal world (attitudes and beliefs) and external cognitive vehicles (e.g. pornography and social networks). Ward and Casey (2010) give the example of the 'children as sexual beings' implicit beliefs being potentially embedded in a number of external cognitive vehicles such as developing connections with other people with this belief, and accessing images and videos that are related to this cognition. The individual's own actions are also integrated into this belief, and this belief serves to inform further offending, which moves away from what was proposed by the implicit theories model (Ward & Keenan, 1999).

3. Following on from the above idea, the model proposes that offenders who are classified as high risk may be more likely to be engaged in more deviant cognitive practices and external contexts. The model appears to propose a circular model of cognitions, in that deviant thoughts shape deviant practices shape deviant thoughts, although there is no explanation as to how an individual enters into the cycle initially.

The idea of situational factors such as intoxication is also presented. The model proposes that men who are intoxicated may be likely to make mistakes about the interpretation of a potential partner's actions, particularly if they lack more pro-social contextual factors, such as awareness of capacity to consent. Unintentionally, this particular idea seems to read like a cognitive distortion itself, talking about verbal encouragement of friends and rape supportive social environments.

4. EMT also considers how physical functioning may impact on the individual's ability to offend. Some physical illnesses are proposed to have an effect on cognitive functioning, by altering the external environment (e.g. making it more difficult to correctly process and respond to external cues) and physical stress affecting internal cognitive functioning. EMT proposes that impaired functioning in one area of the cognitive system can affect the other elements.

The model also proposes modifications for treatment of sexual offenders to reflect the process of offending as understood by EMT. People and/or services who deliver such treatment should look beyond just trying to address the internal cognitions of the offender, and also focus on the external and situational contexts related to the offending behaviour.

The explanations offered by Ward and Casey (2010) for the etiology and maintenance of cognitive distortions of offending is underdeveloped at present, with some of the explanations reading like accounts of cognitive distortions rather than developed explanations of why these distortions are present (e.g. the role of physical illness).

5.2 Theories of sexual offending against children

5.2.1 Precondition Model of Child Sexual Abuse (Finkelhor, 1984)

The model states that there are four essential preconditions for child sexual abuse to occur. Offenders may be motivated by varying combinations of needs, and this may explain differences in offence types.

On reviewing the literature into sexual offending, Finkelhor (1984) noted that sexual offending against children can be explained by four factors: emotional

congruence (an emotional affiliation and identification with children), sexual arousal towards children, blockage (unable to meet sexual needs in a more appropriate way), and disinhibition. The first three factors explained the development of an interest in children, and the fourth is the factor that leads to action.

According to the model, all four preconditions must be satisfied in order for a sexual offence to occur. In all four preconditions, factors relating to the individual's situation and to wider society are discussed. For an offence to occur, the individual must:

1)Be motivated to offend against the child – Sexual preference towards children is key, as Finkelhor (1984) argues that if this was not present, the offender could meet their needs in more pro-social ways,. This precondition refers to the previously mentioned factors of emotional congruence, sexual arousal and blockage. An individual's learning history is proposed to lead to the development of this pre-condition.

Wider socio-cultural factors proposed by the model as relevant in shaping someone's motivation to offend against a child include the dominance of males in relationships, and a supposed preference for men to seek out younger and weaker partners. The model is now almost 30 years old, and perhaps the socio-cultural factors proposed then require some revision. This explanation also does not account for men who offend against male children, or female sex offenders.

2) Overcome internal inhibitions to child sexual abuse – This is the 'disinhibition' factor. The model proposes that there are individual situational factors that lead to disinhibition and thus offending, such as substance use, or the presence of a mental illness. This also relates to cognitive distortions, with offenders justifying their offending to themselves (e.g. Winder & Gough, 2010).

Society's attitudes put forward as having a role in allowing an individual to overcome their inhibitions relating to offending include the tolerance of sexual interest in children. Such attitudes are proposed to impact on cognitions surrounding children to a level that results in disinhibition.

3) Overcome external inhibitions to such abuse – The offender creates a context for the offending to occur, which can involve lengthy planning, or can be more opportunistic. The model proposes that the absence of a mother, or lack of close

supervision of a child may increase the possibility of an offence occurring. Social factors proposed as important are lack of social support for mothers and an erosion of family networks to something more disjointed and separate. Again, the model assumes a male offender, and does not therefore account for a mother who sexually offends against her own children. There are no UK figures on the incidence rates of people who work in a professional capacity with children and go on to offend against them (Erooga, 2012), although a study by Sullivan and Beech (2004) investigating people who sexually offended whilst working in a position of trust reported that 90% of the sample (n = 41) were aware of their sexual preference for children prior to taking up the post, with 15% stating that they took the post for the purpose of gaining access to victims.

4) Overcome the child's resistance – This precondition can be met by using violence and intimidation, or by a 'grooming' method with an aim to secure the trust and 'consent' of the child. The model proposes that children who are unaware of sexual abuse, and who are emotionally vulnerable are at a higher risk of being abused.

The model states that the fact that in society, children are viewed as reasonably powerless, and adults (particularly those in a position of trust) are viewed as people to be trusted and respected, is a socio-cultural factor which may make it easier to overcome the resistance of a child.

The model is sequential, in that the individual must satisfy each precondition in turn in order to lead to the offence occurring. However, this would imply that every person who sexually offends against a child is sexually aroused by children and has a sexual preference for them, which is not always the case (Seto, 2008).

Further critique of the model has been put forward by Ward and Hudson (2001). They argued that although the precondition model has some strengths, it lacks focus and has not been systematically evaluated. They provided further criticism relating to the lack of a single theoretical basis for the model, and stated that the model does not explain why someone would become motivated to offend against children, rather, it focuses on the situational variables leading up to the offence.

5.2.2 Integrated Theory, Marshall and Barbaree (1990); Marshall, Anderson and Fernandez (1999)

The theory takes a developmental perspective in order to consider how certain vulnerability factors may contribute to someone offending against children. The importance of early attachment is highlighted, with an insecure attachment style leading to difficulties in interpersonal relationships, trusting others, management of emotion, low self esteem and poor problem solving. The model proposes that there are vulnerability factors, such as negative childhood experiences that contribute to the child holding a negative view of the world, and may lead to someone becoming a sex offender against children in later life. The theory also considers the impact of being a victim of sexual abuse on forming distorted sexual scripts and relationship blueprints. However, not all children with an insecure attachment will go on to sexually offend against children, and the theory does not address what is different about those who do go on to offend.

The model proposes that the transition to adolescence, which is impacted upon by social, emotional and biological factors, is a 'critical period,' where individuals with existing distorted relationship scripts may struggle to manage these changes in an appropriate manner. The authors highlighted the role of unsuccessful attempts at age appropriate relationships (due to poor social skills, which are underdeveloped due to the aforementioned learning history) further adding to deviant sexual scripts. From this, deviant fantasies develop, which allow the offender to overcome some of their social and psychological difficulties (e.g. improving their self esteem in a scenario where they are not rejected by a sexual partner).

The theory also discusses how the distinction between sex and aggression may not occur in these vulnerable individuals. Most individuals are proposed to be able to separate the two, and recognise the inappropriateness of (unwanted) aggression in a sexual context, but in vulnerable individuals, the two may become connected. However, the model does not convincingly propose the mechanisms implicated in this process, and how vulnerability in childhood, as previously discussed, would cause this in some individuals but not others.

Situational Factors

The vulnerability factors are proposed to interact with situational factors (e.g. mood, presence of a victim), resulting in the act of sexual offending. The model proposes that a greater degree of vulnerability would only require a small amount of situational stressors to result in an offence, whereas individuals with less predisposed vulnerability would be more likely to offend following a high degree of situational factors being present.

Maintenance of Offending Behaviour

Within the model, reinforcement related to having their needs met increases the likelihood of offences being repeated. The individual also develops specific cognitive distortions to justify the offending as acceptable.

The theory has been praised for considering the causal mechanisms in sexual offending (Ward & Siegert, 2002). However, the conceptual weaknesses of the model have also been discussed (Ward, 2002). Ward argued that the primary focus on disinhibition does not address the possibility of different offence pathways, and the general nature of the model means that it cannot account for the variety of sexual offences. The mechanism for the fusing of sex and aggression is also seen as not adequately explained.

5.2.3 Quadripartite Model of Sexual Offending, Hall and Hirschman (1992)

Hall and Hirschman (1992) proposed the Quadripartite Model of Sexual Aggression. The model considers how motivation to offend can be underpinned by both state (situational) factors, or trait (longer term) personality characteristics and beliefs, and proposes that offenders will have one primary motive from the following four components that dominates and 'allows' the individual to commit the sexual act against the child:

1) Physiological sexual arousal
2) Cognitions justifying sexual offending
3) Affective discontrol
4) Personality problems

The model further proposes that the dominance of a particular factor is characteristic of a particular type of offender, and suggests areas to target in treatment based on this. Offenders whose primary motivation is physiological sexual arousal are postulated to commit a number of sexual offences against a large number of children, and would benefit from behavioural treatment such as masturbatory reconditioning. The model views offenders who are motivated by cognitions as likely to misinterpret a child's behaviour as being sexual, and should have cognitive therapy to challenge these beliefs. The affective discontrol group are thought to offend due to a particular emotional state, and are impulsive and reactive, with treatment to engender them with improved self control proposed. Offenders with personality problems are proposed to have difficulty establishing age appropriate relationships, and are viewed as the group who would require the most intensive and long term treatment to change their beliefs about themselves and others.

Although the model allows consideration of the different processes that may contribute to an individual sexually offending against a child, the four factors have been criticised for not being as clearly defined as indicated, as physiological arousal is likely to be moderated by cognitions and personality problems (Ward and Siegert, 2002). The model also does not propose how the offender develops these particular vulnerability factors..

The model also seems to view cognitive distortions as pre-existing beliefs, with little information on how such beliefs may develop. Debate about the nature of cognitive distortions remains (e.g. whether they are a predisposing factor in offending or a post-hoc justification; Howitt and Sheldon, 2007) was explored in section 5.1.2 but as yet, there is no firm conclusion.

5.2.4 Pathways Model of Child Sexual Abuse

After critiquing many of the existing models of sexual offending against children, Ward and Siegert (2002) proposed the Pathways Model of Child Sexual Abuse. The model was developed using a process of "theory knitting" (Kalmar and Sternberg, 1998), which in this example involved integrating ideas from the previous models discussed into a more comprehensive framework, which aimed to explain all aspects of sexual offending.

The model proposed that four distinct psychological mechanisms interact to produce vulnerability factors linked to sexual offending against children. These are:

1) Intimacy and social skills deficits – These are hypothesised to be caused by early insecure attachments, and childhood neglect. The individual modifies their expectations of other people's emotional availability. Due to the early attachment style, they have difficulties establishing trusting relationships in adulthood.

2) Distorted sexual scripts – Sexual scripts are described as mental representations (schemas) of sexual experiences that serve to guide behaviour in further sexual encounters. They are shaped by internal, interpersonal and cultural cues, and vary in form based on individual learning history, e.g. early abuse.

3) Emotional dysregulation – A deficit in emotional regulation results in problems with suppressing, eliciting and maintaining behaviours. An individual may have inadequate coping strategies to appropriately modify negative emotions.

4) Cognitive distortions –There are two types of cognitive distortion proposed by the model. The first is that individuals have underlying beliefs that guide behaviour and interaction with others. Information is processed according to this belief, or implicit theory (as discussed in section 5.1.1), and contrary information is rejected, or viewed differently due to the belief held by the individual, compared to someone who does not hold that same belief. Cognitive distortions can also be described as justifications of the offending behaviour, and in this form they are associated with maintenance of self esteem, rather than an underlying belief about the behaviour.

The four difficulties serve as category headings, with more specific characteristics seen as indicative of a deficit in the overarching category, e.g. emotional detachment as a type of emotion regulation difficulty, lack of empathy as a cognitive distortion and/or an emotion regulation difficulty.

Ward and Siegert (2002) proposed that all individuals who sexually offend against children will have deficits in all of the four areas, but may have a

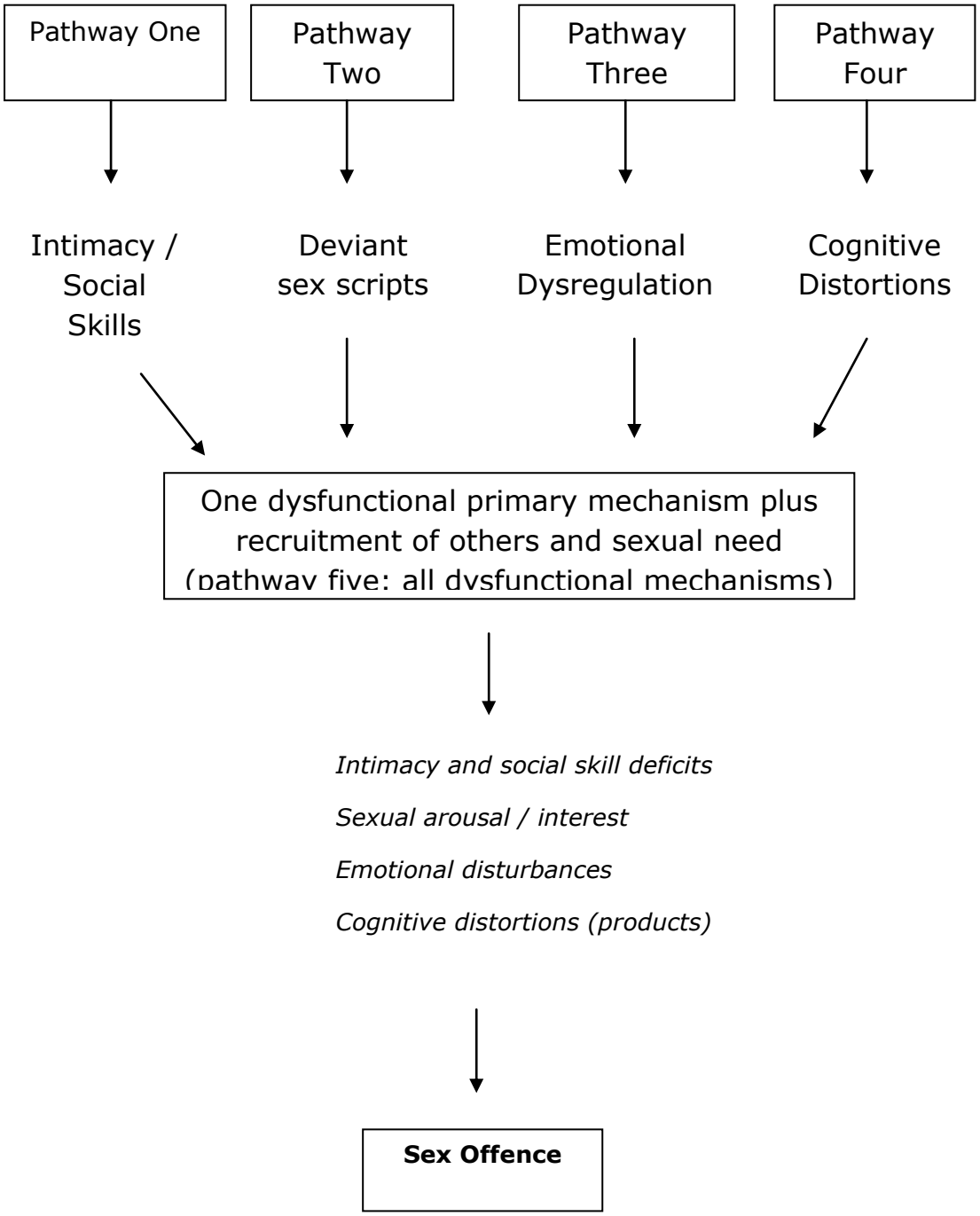
primary causal mechanism. Figure 2 demonstrates the 'route' an individual may take towards a sexual offence.

Differences in the function of the offence are explained by a difference in the severity and pervasiveness of each category, for example, an offender following pathway one would select children as a sexual partner to meet the need for intimacy and closeness.

The authors acknowledged that their model is not yet able to account for individual differences in offence modalities against children, nor does it account for biological causation or explain the maintenance of offending behaviour.

Figure 2.

The Pathways Model of Sexual Abuse (from Ward and Siegert, 2002)



The model does not explain why some people with similar early experiences (e.g. victims of sexual abuse, insecure attachments types) do not become sexual offenders, and how they can 'exit' the pathway before reaching the outcome of offending against a child. Therefore the utility of the model can only be to

describe the pathway someone who has already offended has taken to get to that particular outcome, and cannot be used to predict the likelihood of offending behaviour prior to its occurrence.

Many of the causes or factors relating to sexual offending in the models discussed above are clearly not unique to sexual offending, or even offending at all. There are many individuals who will have some level of difficulty in interpersonal relationships, and/ or who may have sexual preferences that are seen as deviant compared to the mainstream, but these people function in society without becoming an offender. The concept of cognitive distortions in the forms proposed above appear to be more specifically related to sexual offending against children than the other factors proposed.

5.3 Measuring Beliefs and Cognitive Distortions in Sex Offenders

A review of the assessment measures used with sexual offenders against children considered physiological, self-report and attention based methods (Kalmus & Beech, 2005). Phallometric assessment is critiqued in terms of its validity, as there is potential to falsely classify participants (McConaghy, 1999), which is potentially problematic and risky. Phallometric assessment has also been found to have poor test-retest reliability, (Marshall & Fernandez, 2000). The issue with faking penile responses is also higlighted, with up to 80% of participants demonstrating the ability to suppress penile response when asked to (Kalmus & Beech, 2005); therefore the assessment may not give a more accurate picture of an offender's sexual preference and beliefs than a questionnaire method. Conversely, the apparatus used in this procedure has been demonstrated to increase penile response (Amoroso & Brown, 1973), therefore outcomes may be affected by the context of the assessment if the apparatus can increase penile response.

Self-report measures such as questionnaires and a card sort method were also reviewed (Kalmus & Beech, 2005), although much of the literature highlights the possibility of participants faking these measures. The Multiphasic Sex Inventory (MSI, Nichols & Molinder, 1984) is a 300 item questionnaire consisting of 20 scales relating to sexual behaviour and offender beliefs, and is commonly used with sex offenders (Kalmus & Beech, 2005). The authors of the review concluded

that while the measure could be faked, it is possible to identify through the lie and denial scales when it is being faked. Although useful, this still does not allow researchers and clinicians to investigate what is motivating individuals who do 'fake' on the measure.

Attentional methodologies used to assess sexual interest include measures of viewing time to sexual stimuli, such as the Abel Assessment for Sexual Interest (AASI; Abel, Jordan, Hand, Holland & Phipps, 2001). However, these measures are fairly transparent, and therefore open to being faked by participants. Kalmus and Beech (2005) proposed that attentional measures utilising an information processing paradigm seemed most promising, as it has strong face validity, and the possibility of faking seems to be lower than more transparent measures.

5.4 Relational Frame Theory

Arbitrarily applicable relational responding (e.g. Steele & Hayes, 1991) is learned by initial comparison of the values of known objects (such as size, e.g. A is bigger than B), and the subsequent reinforcement that is received. What follows from this initial learning is a deriving of relations via a process of mutual entailment, which is the process of deriving an untrained relation in the opposite direction based on what it already known (A is bigger than B, therefore B is smaller than A), or by combinatorial entailment (A is bigger than B, and B is bigger than C, therefore A is bigger than C and C is smaller than A).

Blackledge (2003) explained combinatorial entailment using an example of a snake being related to fear, without the person having been told to be scared of snakes, or ever seeing a snake. The person may have learned that snakes can be dangerous and unpredictable in one context, and has also had a previous learning experience relating danger and unpredictability to fear. Therefore, there is a derived relationship between 'fear' and 'snake' (unpredictability is scary, snakes are unpredictable, and therefore snakes are scary).

Relational framing can also occur through a process known as transformation of stimulus function. The function of a particular stimulus in a person's relational network can be transformed based on the nature of how it relates to another stimulus function within the network. In the context of the present experiment,

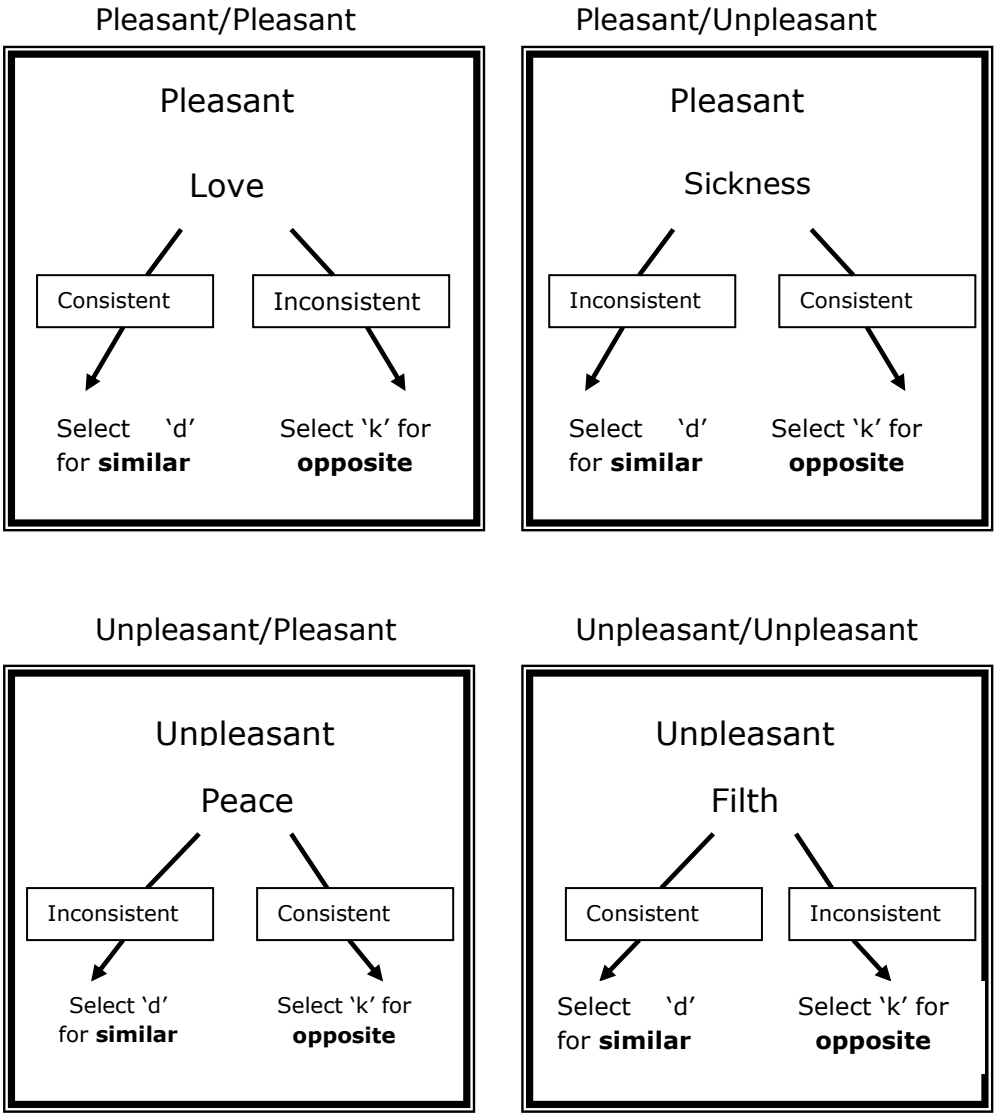
an individual may have learned that 'adult' is different to 'child', and adults have the potential to participate in sexual activity (e.g. adults are sexual). The idea of 'child' as being different to adult would therefore result in 'child' being viewed as having a different set of sexual or nonsexual characteristics (e.g. children are not sexual), without a person having directly experienced or tested this.

5.5 The IRAP method

The first IRAP study (Barnes-Holmes et al, 2006) involved participants being presented with a sample stimulus of either 'pleasant' or 'unpleasant.' A target word was then presented, either pleasant (e.g. love) or unpleasant (e.g. accident) in nature. The relational terms used were 'opposite' and 'similar.' Participants were required to choose one of these in relation to the target stimulus, depending on what had been deemed 'correct' for that trial (not necessarily consistent with the participant's belief). Response latencies from the onset of the trial to the time of the response were recorded. These were found to be shorter for the consistent belief trials. Figure 3 shows screenshots from this study, detailing each of the four possible stimulus combinations.

Figure 3

Screenshots from Barnes-Holmes et al (2006) first IRAP paper



Note: The sample (Pleasant or Unpleasant), target word (love, sickness, peace and filth, etc.), and response options (Similar and Opposite) appeared simultaneously on each trial. Arrows with superimposed text boxes indicate which responses were deemed consistent or inconsistent (boxes and arrows did not appear on screen). Selecting the consistent response option during a consistent block, or the inconsistent option during an inconsistent block, cleared the screen for 400 ms before the next trial was presented; if the inconsistent option was chosen during a consistent block, or the consistent option during an inconsistent block, a red X appeared on screen until the participant emitted the alternative response. (pg. 30, Barnes-Holmes et al., 2006)

5.6 The use of the IAT with sexual offenders against children

The IAT was utilised in order to test three implicit beliefs from Ward and Keenan (1999) and Ward's (2000) implicit theory hypothesis model – children as sexual

beings, uncontrollability, and entitlement to sex (Mihailides et al, 2004). Comparing sexual offenders, nonsexual offenders and controls (a group of male and female university students described as non-offenders), they hypothesised that the IAT effect (where there is a difference in response times between associated and less- associated information) would be greater in the sex offender group. Participants were asked to match an initial target concept ('children' or 'not children') with words thought to be congruent with each implicit belief, and words that are semantically opposed (with the prefix 'not-'). The results showed that sex offenders had significantly stronger implicit associations on the three beliefs tested than controls, and had stronger implicit associations on two of the three (children as sexual beings and uncontrollability) compared to nonsexual offenders. However, they cautioned that this method cannot point to causality, or explain the role that cognitive distortions play in sexual offending.

The procedure has also been used to compare paedophilic offenders (victim aged below 12 years) with hebephilic offenders (victims aged 12 to 15 years; Brown et al, 2009). The researchers hypothesised that only the paedophilic offenders would demonstrate an association between children and sex, using nonsexual pictures of children and adults, paired with sex and non-sex words (matched for length). The researchers reported that the results confirmed their hypothesis, with a significant main effect found for offender type. It was also highlighted that those who denied their paedophilic offences had similar child/sex IAT scores to those who admitted such an offence.

The Explicit and Implicit Sexual Interest Profile (EISIP; Banse, Schmidt & Clarbour, 2010) is a measure incorporating elements of the IAT along with an explicit measurement and one of viewing time, which was developed in order to investigate the reliability and convergent, discriminant and incremental validity of the explicit and implicit measures within it. The IAT and viewing time measure combined were found to demonstrate good discriminant validity between offenders and controls, with the viewing time measure outperforming the IAT in terms of criterion and convergent validity and reliability.

5.7 The Role of Context in Beliefs

There is theoretical (EMT; Ward & Casey, 2010, RFT; Hayes et al, 2001) and empirical (Boysen et al, 2006; Gannon, 2006) acknowledgement that beliefs may not be fixed, and are modifiable in particular contexts. People arrested and convicted of such offences will almost certainly be asked to explain 'why' they committed an offence and the process of asking this creates a new context for a cognition to be expressed. Whether this cognition was present prior to and/or during the commission of the offence is not known.

The implicit theory of 'children as sexual beings' (Ward and Keenan, 1999) would therefore be viewed as the relation between two stimuli: the construct of 'child/children' and the concept of 'sex'. This relation can be formed with reference to other related stimuli. Most individuals would relate 'adults' and 'sex,' based on own experiences, education, awareness of society and legal guidance on sex etc. Following this would be an indirect relation between 'child' and 'sex' which would manifest in the idea that children are not sexual, and should not engage in sexual acts. Most people will not have had the experience of relating sexual attributes to children, therefore this relational frame will be weak. It is hypothesised that the relational frame would be stronger for those who have experience of relating the two, perhaps either through their own abuse, perhaps through committing such abuse, or perhaps because they are exposed to accounts of such abuse in a treatment capacity, In terms of RFT, this is a transformation of stimulus function as discussed earlier (Hayes et al, 2001). However, if an individual is exposed to accounts of children being sexually offended against, it would be assumed according to the theory that they would be more likely to relate these stimuli.

When considering people who work with sexual offenders, they are likely to have had a lot of exposure to various cognitive distortions and offence accounts on a regular basis, in a way that people who do not work in this context do not. Given the above literature relates to convicted offenders, if context plays a key role in the development of these relations, are the tests used to assess such relations specific enough? Previous research (Dawson et al, 2009) has demonstrated the differences between sex offenders and controls on the IRAP with regards to discrimination of the 'children as sexual beings' implicit theory, but we do not know what impact environment and post-offence learning may have had on the

offender group. If people who work with offenders have similar results on the same measure, the importance of environment in shaping beliefs is highlighted. It would also lead to questions about the 'exclusiveness' of implicit theories in sexual offenders if they were also seen to be present in non-offenders.

5.8 The Impact of Working with Sex Offenders

Research has found that staff working with this group are more suspicious of others' behaviours around children (Hatcher & Noakes, 2010), with qualitative analysis of staff who work with sex offenders in correctional facilities in Australia generating this as the second most common theme discussed by this group. This increased suspiciousness of others would indicate a viewpoint that is completely perpetrator blaming and negates the victim blaming view proposed by some sex offenders (e.g. the child was coming onto me).

Vicarious traumatisation has been conceptualised as a counter-transference reaction (Pearlman and Saakvitne, 1995). When a treatment provider is listening to a detail account of an offender's sexual activity with a child, the child is obviously not present in the room. A counter transference process would see the member of staff as being put into the child role, and therefore experiencing the re-telling of the offence from the perspective of the victim. In RFT terms, this can be perhaps explained as a transformation of stimulus function, where the session with the offender takes on a new meaning, and thus becoming a frightening environment for the staff member, and a process of reinforcement taking place that transforms the sessions into something more negative than expected.

6 Methods

6.1 Epistemological Position

The epistemological position of the researcher was considered. Although the current research appears to best fit with a positivist view, as the methodology consists of hypotheses and there is an assumption of 'truth', in that the IRAP will distinguish between group membership for the experimental and control groups, this does not quite reflect the arguments made in the introduction. With regards to the theory being tested (Ward & Keenan's 1999 Implicit Theories), there is perhaps a conflict between using a measure grounded in behavioural theory to test a cognitive theory (see Sections 1.4 and 5.4 for more information). Similarly, the researcher does not accept the presence of implicit theories as explained by Ward and Keenan (1999) as fact, therefore a strictly positivist view is rejected. Instead, a critical realist stance is taken, which has also guided Ward and colleagues in their own work into understanding sex offenders (Ward, Polaschek & Beech, 2005). Critical realism according to Ward et al (2005) involves a belief that although proposed theories tend to converge with the reality of how the world is, but often theories are only partially true, as there are a number of possible options about how a particular behaviour can be explained.

6.2 Ethical Issues

Ethical approval was sought from and granted by the University of Lincoln Ethics Committee (Appendix H). Participants were given an information sheet (Appendices A & C) at least 24 hours before being approached to ask if they would consent to take part (Appendices B & D). After the study, participants were given a verbal debrief, with a short explanation of the study aims, and payment in voucher form was given and signed for (Appendix E).

The main ethical issues considered for the study are as follows:

6.2.1 Confidentiality

All data generated from the study was anonymised to ensure that no-one was identifiable as a result of their participation. Participants were given an ID number which was only linked to their name in one document, which was kept securely. The number was then used in the IRAP computer file and to label the CDS.

6.2.2 Deception

Participants were not informed about the experimental hypothesis prior to completing the task. Although the IRAP effect is still observable even when participants are instructed how to "fake" the measure (McKenna et al, 2007), it was decided that if the participants were primed on how they were expected to respond on both the explicit and implicit measure, this would increase the probability of participants changing their behaviour, which may have resulted in a slightly different phenomena being investigated, as this information would form a new context which may impact on responding.

6.2.3 Distress to participants

The research involved asking people to respond to statements about children and sex, which may be upsetting to some. The nature of the research was made clear in the participant information sheet given prior to consenting. Participants were informed that they are able to withdraw at any time up until the study was written up. A debrief followed immediately after completion of the tasks.

6.2.4 Payment of participants

It was decided by the researcher and the academic supervisor to pay all participants who took part in the study £5. This was not offered as an incentive, rather to reimburse the participants for their time and value their contribution.

6.3 Sample size

In order to calculate required sample size a priori, G Power version 3.1.2 (Buchner, Erdfelder, & Faul, 1997) was used. The 'ANOVA: Repeated measures, within-between interaction' was chosen due to the 2x4 nature (two groups and four trial types) of the experiment, and the following parameters were entered: Effect size f = 0.3, α error probability = 0.05, power = 0.8. The total sample size required in order to detect a medium effect size of 0.3 is 26. The effect size was selected as it was the effect size found in the Dawson et al (2009) study.

6.4 Inclusion and Exclusion Criteria

Given the hypotheses for the study, inclusion and exclusion criteria were established. Possible participants who met these criteria were given an information sheet about the study following this screen.

The staff group were required to have had at least 12 months experience of direct work with people who have sexually offended against children, and no convictions of any sexual offence against a person under 16 years old. The control group were required to have had no history of working with people who have sexually offended against children and be over 18 years of age. They were also asked to exclude themselves from the study if they had any convictions for a sexual offence against a person under 16 years old.

6.5 Procedure

6.5.1 The IRAP

The first block of the practice trials required participants to respond in a way that is relationally consistent with an Adult-Sexual bias. Therefore, if the word 'Adult' was presented with any of the Sexual category words (e.g. 'Adult' and 'Erotic'), selecting 'True' was a correct response. Similarly, the participants identifying this pairing as 'False' would be incorrect. If the word 'Child' was presented with any of the Sexual category words (e.g. 'Child' and 'Erotic'), selecting 'False' was a correct response, and selecting 'True' would be incorrect. The following instructions were displayed to participants prior to the commencement of the first practice trial:

IF YOU MAKE AN ERROR YOU WILL SEE A RED "X" BELOW THE STIMULUS – WHEN THIS HAPPENS YOU HAVE TO MAKE THE CORRECT RESPONSE TO PROCEED

THIS IS PRACTICE - ERRORS ARE EXPECTED
PRESS THE SPACE BAR TO START

After completing the first practice block, participants were presented with feedback on the percentage of correct responses and the median response time for the 24 trials. Participants were then required to press the space bar to proceed, then were given further instructions:

IMPORTANT: DURING THE NEXT PHASE THE PREVIOUSLY CORRECT AND WRONG ANSWERS ARE REVERSED. THIS IS PART OF THE EXPERIMENT. PLEASE TRY TO MAKE AS FEW ERRORS AS POSSIBLE - IN OTHER WORDS, AVOID THE RED X

IF YOU MAKE AN ERROR YOU WILL SEE A RED 'X' BELOW THE STIMULUS – WHEN THIS HAPPENS, YOU HAVE TO MAKE THE CORRECT RESPONSE TO PROCEED.

THIS IS PRACTICE - ERRORS ARE EXPECTED

PRESS THE SPACE BAR TO START

Therefore, in order to avoid the red 'X' on the second block of practice trials, participants were required to respond in a way that is relationally consistent with a pro-'Child-Sexual' bias. Thus, if the stimuli 'Child' and 'Erotic' were paired in this trial, indicating that this was 'True' was defined as a correct response, and would move the participant on to the next pair of stimuli. Similarly, indicating that the pairing of 'Adult' and 'Erotic' as 'False' would result in the same outcome.

Assuming practice criteria were met (see section 3.6), participants then progressed to the test block phase. The following instructions were presented:

IMPORTANT: DURING THE NEXT PHASE THE PREVIOUSLY CORRECT AND WRONG ANSWERS ARE REVERSED. THIS IS PART OF THE EXPERIMENT. PLEASE TRY TO MAKE AS FEW ERRORS AS POSSIBLE -- IN OTHER WORDS, AVOID THE RED X

IF YOU MAKE AN ERROR YOU WILL SEE A RED 'X' BELOW THE STIMULUS – WHEN THIS HAPPENS, YOU HAVE TO MAKE THE CORRECT RESPONSE TO PROCEED.

THIS IS A TEST – GO FAST, MAKING A FEW ERRORS IS OK

PRESS THE SPACE BAR TO START

The first trial therefore required participants to respond in way that is consistent with 'Adult-Sexual, Child-Nonsexual' relational responses. The second test block required participants to respond in a way that is inconsistent with the previously correct responses. This pattern of Consistent followed by Inconsistent continued until the sixth and final test block. Following completion of this test block, the following was presented on screen:

The sorting tasks are complete – Thank you

Press the space-bar to proceed

On pressing the space-bar, the final instructions were displayed:

Thank you

This is the End of the experiment

Please report to the Experimenter

6.5.2 The CDS

Figure 4

Items from the Cognitive Distortion Scale (Gannon, 2006)

1. Having sex with a child is not really all that bad because it doesn't really harm the child
2. People underestimate how much children know about sex
3. Some children know more about sex than adults
4. If an adult has sex with a child who enjoys it and seems to want it, it shouldn't be considered a crime
5. Men who have sex with a child are usually led into it by the child
6. Many children are sexually seductive towards adults
7. Most sexual contact between adults and children does not cause any harm
8. Some children are mature enough to enjoy a good sex joke with adults
9. Children are not as innocent as most people think
10. Children that sit in a way that is revealing are suggesting sex
11. An 8-year-old can enjoy a good sex joke
12. Having sex with a child is a good way to teach them about sexuality
13. Children who are unloved by their parents are actually helped by men who have sex with them

The IRAP has been shown to demonstrate convergent validity with self report measures when participants are asked to respond to stimuli that are not socially sensitive (Hughes and Barnes-Holmes, 2011). This has been demonstrated in a number of studies assessing a variety of stimuli e.g. self-esteem in a student population (Vahey, Barnes-Holmes, Barnes-Holmes, & Stewart, 2010), and in

attitudes towards city and country life (Barnes-Holmes, Waldron & Barnes-Holmes & Stewart, 2009), although only a moderate correlation was found. However, where explicit attitudes are socially sensitive, such as in the present study, a correlation may not be found. In the current study, it is assumed that the IRAP and the CDS will measure different types of relational responding.

6.6 Reliability and Validity

6.6.1 Discriminant Validity

The discriminant validity of the IRAP has been compared to other implicit measures. Barnes-Holmes, Murtagh, Barnes-Holmes and Stewart (2011) compared the outcomes of attitudes of vegetarians and meat eaters to images of meat and vegetables on the IAT and the IRAP, using a 'known groups' approach to investigate whether the IRAP could be used as a predictive tool. The research found that both tools could determine group membership over an explicit measure. Dawson et al (2009) found that the IRAP may have some discriminative validity in predicting group membership (sex offender or control).

6.6.2 Predictive Validity

Studies have also demonstrated the ability of the IRAP to predict real life behaviour (Carpenter, Martinez, Vadhan, Barnes-Holmes, & Nunes, 2012). The research found that the IRAP scores from a cocaine dependent sample prior to commencement of a treatment programme predicted attendance and adherence to the programme for the first 12 weeks better than self reports of cravings for cocaine. A study looking at spider phobia (Nicholson & Barnes-Holmes, 2011) found that the IRAP scores were also able to discriminate between high fear and low fear, as well as predicting who would be able to approach a live tarantula.

6.6.3 Reliability of the CDS

The CDS was tested for internal consistency by Gannon (2006), who reported a 0.94 level using Cronbach's Alpha. Test re-test reliability was calculated as 0.89 in their study.

7. Extended Results

7.1 Normality

The values of skewness and kurtosis are displayed in Table 6. The data was checked for homogeneity of variances on Levene's Test of Equality of Error Variances. For trial types Adult Sexual (F (1,38) = .195), Adult Non-sexual (F (1,38) = .133), and Child Sexual (F (1,38) = .671), this is not significant. However, it is significant for the Child Nonsexual trial (F (1,38) = .029).

Table 6

Skewness and Kurtosis Values for the IRAP and CDS

Category	Skewness	Z Skewness	Kurtosis	Z Kurtosis
Adult Sexual	-0.037	-0.10	0.024	0.03
Adult Nonsexual	0.554	1.48	-0.534	-0.73
Child Sexual	0.002	0.005	-0.098	-0.13
Child Nonsexual	0.777	2.08	0.210	0.29
CDS	1.249	3.34	0.330	0.45

Standardised Z scores were calculated for skew and kurtosis (Field, 2009). Absolute values greater than +/-1.96 are significant at $p < .05$, and indicate that the data is not normally distributed. The Child Nonsexual trial type, and the CDS exceeded this value, with all others indicative of normal distribution.

The data for the Child Nonsexual trial type and the CDS were checked for outliers using a boxplot. One outlier was identified for the Child Nonsexual trial type, and the decision was made to transform this score to within two standard deviations above the mean in order to avoid transforming the whole data set and thus retaining power (Field, 2009). Two outliers were identified in the staff group for the CDS, and these were transformed to a figure two standard deviations above the mean (Table 7).

Table 7

Skewness and Kurtosis results following transformation of data

Category	Skewness	Z Skewness	Kurtosis	Z Kurtosis
Child Nonsexual	0.537	1.44	-.422	-0.60
CDS	1.32	3.52	0.569	0.77

Following the transformation of the data, the 'Child Nonsexual' trial type data now followed a normal distribution. There was no effect on the CDS, therefore a nonparametric test will be used to analyse the data for this measure.

7.2 Further analyses

7.2.1 Age

The mean ages in the staff group (M = 38.6, SD = 8.5) and control group (M = 28.8, SD = 11.6) were significantly different ($F(1,38) = 9.33$, $p < .05$). Categories of age were defined (18-24, 25-44, and 45 and above) and a series of one way ANOVAs were conducted in order to determine whether age impacted on individual trial types and the CDS. Only the CDS scores were significant ($F(2,37) = 33.2$, $p < .05$), with the younger age category scoring highest (Mean = 11.75, SD = 4.4). There was no difference between the other two categories (25-44 Mean = 2.38, SD = 2,1; 45 plus Mean = 2.38, SD = 3.2).

7.2.2 Gender

A significant effect of gender was found for the Cognitive Distortion Scale ($F(1,38) = 15.5$, $p < .05$), with the male participants (M = 6.9, SD = 5.4) scoring higher than the female participants (M = 1.9, SD = 2.3), suggesting that male participants demonstrated higher levels of non-discrimination when relating children and sex stimuli than female participants. The IRAP trial types did not significantly differ according to gender.

8. Extended discussion

8.1 Vicarious Traumatisation

A model of the impact of working with sexual offenders was proposed by Farrenkopf (1992). Four phases of impact were proposed to be experienced by the therapist. The first phase is 'shock', with the staff member feeling fearful and vulnerable. The second is entitled 'mission,' and involves the therapist engaging in a process of adaptation which balances their desire to help the offender, whilst managing their emotional reactions to the nature of the offences being discussed. The third phase is 'anger,' during which the therapist is intolerant of the offender, which leads to the fourth phase of 'erosion,' when staff are likely to feel resentful and depressed. However, there is an alternative fourth phase, where motivation is regained and therapists are able to work compassionately with this group. Although the theory has not been empirically tested (Moulden & Firestone, 2007), it is possible to see how the 'anger' and 'erosion' phases may be applicable to the staff in the present study, who have perhaps become fatigued with the volume of cognitive distortions they could have heard, and therefore strongly oppose the association of children and sexual terms.

8.2 Implicit Theories (Ward and Keenan, 1999)

The results for the staff group alone may be interpreted as providing evidence for the Implicit Theory Model (Ward and Keenan, 1999), in that when investigating a staff group with comparable post offending contexts, endorsement of 'Child – Sexual' terms is not present. However, the control group results would offer an alternative perspective on the validity of this theory. If 'Child – Sexual' terms are related by a non-offender group, this 'belief' is not exclusive to sexual offenders, and may be suggestive of such beliefs being on a continuum.

The issue of child sexuality is contentious. Stories about teenage pregnancy rates increasing make headlines, yet Government statistics show that the rate is actually falling. Between 1998 and 2009, the under 16 conception rate fell by 15% (Department of Education, 2011). The Government's 'Teenage Pregnancy Strategy: Beyond 2010' (Department of Health, 2010) acknowledged that to address high teenage pregnancy rates and poor sexual health in young people,

there needs to be more opportunity for young people to talk about sex, with 96% of young people and 86% of parents believing that Sex and Relationships Education should be delivered in schools. The same paper reported that 80% of parents believed that children should have confidential access to contraception, even if they are below the age of 16 (age of consent). This is indicative of adults supporting the idea that children are capable of being sexual and engaging in sexual acts.

The research literature has also considered the sexuality of children. A study of 1114 children aged between two and 12 years old with no history of sexual abuse detailed the types of sexual behaviours children can engage in, such as sexual interest, exhibitionism and overstepping personal boundaries (Friedrich, et al., 1998). A parental report measure (The Child Sexual Behaviour Inventory) consisting of 38 sexual behaviours (e.g. touches sex parts in public, talks flirtatiously, knows more about sex) was administered, and parents were asked to rate the frequency of these behaviours. Sexual behaviours were observed in all age groups (2-5, 6-9, and 10-12 years), with the mean total frequency score decreasing as age increased. Identifying children as having the potential to engage in behaviours that are perceived as sexual by adult standards is therefore not an unusual phenomenon.

Therefore the concept of 'Children as Sexual Beings' within Ward and Keenan's (1999) model as it stands is too vague and requires further definition of the beliefs of people who sexually offend against children. Simply stating that sex offenders see children as sexual beings does not adequately explain offending, as a sample of non offenders in the present study, and also in other research (e.g. Friedrich et al 1998), indicate that children from a young age can be viewed by adults as sexual in their actions. This viewpoint does not necessarily lead to action.

All theories of sexual offending previously discussed in this paper discuss the role of cognitive distortions and beliefs about children in offending. Indeed, sexual offending behaviour programmes are hypothesised to modify such beliefs, with a view to reducing the risk of re-offending. Although recidivism rates are relatively low for treated offenders (4.6%), they are also relatively low for untreated offenders (8.1%) in a study comparing adult male offenders who had

completed Core SOTP with those who had not completed treatment (Friendship, Mann & Beech, 2003). It is possible that the sex offender label and its associated sequelae is aversive enough for the great majority of offenders to discourage future offending behaviour, including multiple hours and months in a treatment programme. Meanwhile, perhaps for the control group this is the first time they have been asked to consider children's sexuality, therefore what is being measured is an initial reaction, as they do not have the same relational networks around children and sex that the staff group who have had exposure to offence accounts do. In effect, the study is creating a context for the control group to demonstrate the transformation of the stimulus function of 'child' in relation to their existing relational networks about adults and children, and adults and sex.

8.3 Conceptual Issues

8.3.1 Response Times

Although the D-IRAP algorithm controls for individual differences in cognitive and motor speed, it is not a perfect solution, as the D-algorithm makes it less obvious to identify particular responses to particular trials that have contributed towards the overall score (Teige-Mocigemba et al, 2010). In the present study, the D-algorithm eliminated scores over 10,000ms, but there is a large time difference between an individual responding within 400ms and an individual responding within 9999ms, and thus the possibility for some participants to respond from their extended relational network. More recent IRAP studies (Nicholson & Barnes-Holmes, 2011) have utilised a 'Too Slow' message when participants have not responded within 2000ms. Although this is potentially beneficial for ensuring that immediate relational responses are captured, it could also mean that fewer participants would generate usable results, and more participants would respond incorrectly under the pressure of giving a response.

8.4 Cognitive Distortion Scale

It is important to note that there were certain items that none of the participants endorsed, such as 'If an adult has sex with a child who enjoys it and seems to want it, it shouldn't be considered a crime' and 'Men who have sex with children are usually led into it by the child'. Items that were endorsed tended to be about awareness of sex, sexual humour, e.g. 'People underestimate how much children

know about sex' and 'Children are not as innocent as most people think.' Therefore though the scores are significantly different to the staff group, they are not necessarily indicative of a sexual preference towards children – we would expect that the justifications for offending given by convicted sex offenders would be very different to the statements that were agreed with only slightly by the control group in this study. The CDS was developed to measure the Children as Sexual Beings implicit theory, but the questions included measure a very specific concept of children as sexual, one that is mainly applicable to offenders with child victims only.

8.5 The Concept of a Child

The lack of specificity in the term 'child' was highlighted by some participants. When asked what age the tasks were referring to, participants were told that it was a person under the age of 16. This was also explained to participants prior to starting the task. The request for a specific age is perhaps suggestive of the fact that they would have responded differently if they were asked to respond to different ages (e.g. a 2 year old compared with a 15 year old). With no specific age given to participants, it is not possible to know what image they held in mind when completing the tasks. Further research could investigate the impact of orienting participants to a particular age, either verbally or pictorially.

8.6 Context

The idea of the context in which the research takes place having an impact on thoughts and responses is also discussed in the EMT approach to cognitive distortions in sex offenders (Ward & Casey, 2010). With regards to the IRAP, research has demonstrated that the IRAP is difficult to fake even when participants are given specific instructions to do so (McKenna, Barnes-Holmes, Barnes-Holmes & Stewart, 2007). However, the response latencies in the faking study were modified in line with the original D-algorithm developed for use with the IAT (Greenwald et al, 2003), which involves transforming all data over 3000ms to 3000ms for the purpose for analysis. The D-IRAP in its present form excludes responses over 10,000ms, which gives the participants a much longer time to respond, and thus may increase the possibility of responses from an individual's extended and elaborated relational network.

8.7 Implications for Utility

8.7.1 Predictive utility

From the discriminant validity analysis, it seems that the IRAP was able to discriminate between the two groups on the basis of their responses to the 'Child-Sexual' trial type. In terms of the control group, the results are indicative of an issue with the underlying theory being tested. The utility of the measure is increased when it is testing a theory that is somewhat more robust.

8.7.2 Clinical Utility of the IRAP

Finding the presence of 'Child-Sexual' relations in a non-clinical, non-offender group has some implications for the clinical utility of the IRAP. If normality is not established with extensive research evidence, the measure cannot be used in the context of identifying difference from the norm. However, this is potentially difficult, as indicated between the differences between the control group in the present study and the Dawson et al (2009) study. No two control groups can be assumed to be the same, and indeed 'normal.' The IRAP potentially has utility as a pre- and post-treatment measure, as demonstrated in Carpenter et al.'s (2012) study on cocaine users, but the underlying theory it is measuring must be more robust and valid than the Implicit Theories model (Ward & Keenan, 1999). The possibility of offenders who have completed extensive treatment programmes still demonstrating 'Child-Sexual' stimuli non-discrimination post-treatment, but this should not be used as a reason for recommending further treatment or detention, when the current study has demonstrated the potential for non-offenders to relate these terms. It is possible that the pre- and post-endorsement of 'Child-Nonsexual' terms may be more relevant, if offending behaviour programmes aim to highlight the non-sexual nature of children (e.g. inability to consent, impact of being a victim).

The IRAP has potential to be used pre- and post- offending behaviour programmes, as a measure of change, but the non-discrimination of 'Child Sexual' statements being made by the control group suggests that this belief may not be what is different and unique about sex offenders. There may be other views or beliefs that are present in sex offenders, such as those that were not endorsed by the control group on the CDS.

8.8 Ethical Issues

Although all efforts were made to preserve confidentiality of participants beyond the knowledge of the researcher, given the method of collecting data from the staff group at their workplace, there was some awareness from this group about who else would be taking part. It is possible that there were some concerns from individuals relating to identification when the results were disseminated, for example there may have been a fear that if someone scored in a way that indicated endorsement of 'Child Sexual' items, this may have been written up in a way that allowed them to be identifiable to colleagues. This also relates to the possible impact of context on results. Participants were advised about confidentiality in the information sheet, and were also informed that they were able to request that their data is removed from the study up until a fixed date.

9. Reflective section

Throughout my thesis I have discussed the role of context in the formation of thoughts and beliefs, and the way in which these are modified in line with wider relational networks. My basic and immediate relational response to the idea of reflection relates to the reflective section being an extra piece of work on top of an already fairly long process. My extended and elaborated relational response was to consider that this is an essential component of the thesis, and while writing this very introduction, I felt that the process itself might be rewarding as a way of finalising the process of carrying out and writing up the research.

Throughout the reflection, I aim to try and write about my immediate relational responses in the interests of openness and honesty about the process, although following a process of proofreading, no doubt the finished product will be a representation of my extended relational networks, based on what an appropriate reflective piece should look like.

Prior to commencing doctoral training, I had worked for two and a half years as a Research Assistant for the University of Oxford, working on a project in a high security prison. I had a positive experience of this post, and therefore had some vaguely positive thoughts (and also many worries) about conducting my doctoral research. I arranged a meeting with my research supervisor to discuss a possible research project, having no strong ideas about what I would like to do. At that point, I was fluctuating between doing something different, and doing something familiar (forensic). I had previously worked with female offenders, and found this to be an interesting area, so I wondered if it would be possible to do something in that area.

Upon meeting my research tutor, the idea of the IRAP as a possible project was introduced. He explained his own research (Dawson et al 2009), and a possible idea for my own project was developed: using the IRAP to compare the responses of people who have committed contact sex offences against children to people who have committed non-contact (i.e. internet and possession) offences against children to 'Child – Sexual' stimuli. I felt that this project would be interesting, but felt I had a lot to learn about RFT and the IRAP, both of which I was previously unfamiliar with. I placed RFT in a frame of co-ordination with

behaviourism: behaviourism can appear fairly excluding to outsiders, therefore RFT will also be excluding and inaccessible.

Throughout the process I found my understanding of RFT was very context dependent. During research meetings and RTF meetings with other trainees and members of course staff, I felt that I had grasped the concept and would get quite excited about the amazing research I was about to carry out. But later, perhaps when I was attempting to explain the theory to someone else, I found that my understanding was not as impressive as I had thought. I can't say that my opinion of RFT has changed from my initial framing of it as inaccessible.

It was not possible to recruit enough sex offenders to the project, and it this point it became apparent that a change in project would be required; only a few months prior to the original thesis deadline.

At previous RFT meetings, the role of context on beliefs had been discussed, particularly relating to the 'Children as Sexual Beings' implicit theory. Was it possible that non-offenders could view children as sexual? I had a recent example from my clinical placement at the time of a sexually active 14 year old, and felt that this context had led me to reflecting on my own thoughts about the possibility of children engaging in sexual behaviour. The issue of legality was also present in these reflections, and I wondered how this would influence people's thoughts about children and sex? In my own reflections I found myself thinking 'yes teenagers can behave in sexual ways... but it's not okay as it is illegal,' perhaps illustrating the switch for basic and immediate relational responses (BIRRs) and extended and elaborated relational responses (EERRs).

Given the contacts we had already made with Probation, my research tutor and I speculated on how working with sex offenders would impact on an individual's beliefs about children and sex. Would their performance on the IRAP be comparable to sex offenders, because of the nature of their job role (hearing accounts of sexual offending) or would there be the opposite effect, with the staff group having heard such accounts, and had training to attempt to alter these beliefs in others, therefore developing a firm belief that children are in no way ever sexual. We thought that the outcome might potentially add to the literature about 'cognitive distortions,' and though the results were perhaps not

quite as I expected, I still feel that I have produced a piece of work that has some clinical and theoretical utility.

9.1 Epistemological position

Initially when commencing the project, I felt that because of the nature of my study (quantitative), I would be taking up a positivist position, searching for a 'truth.' However, as I got further into the process, this position felt incompatible with what I discovered from the literature I was reading, my own reflections, and discussions in supervision. Given the flaws in the current theories of sexual offending which mean that they do not fully explain how someone comes to be an offender, it seemed impossible to me that there was a truth about this process. This was further confirmed by my results. If 'beliefs' are present in non offenders that were previously proposed to be unique to offenders, it seems that the idea of beliefs motivating behaviour (in offenders) is too simplistic and reductive. Views on children and sex fluctuate over time and generations. I have reasoned that it seems an impossible task to find one model that explains the process of committing a sexual offence, for every offender and every offence type. The utility of measures such as the IRAP may reside in the capture of a context related construct.

Extended section word count: 12,263

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Appendices

Appendix A. Control Information Sheet

Trent Doctorate in Clinical Psychology

PARTICIPANT INFORMATION SHEET: CONTROL GROUP

Version 1 (April 2010)

Assessing views on age and sexuality

You are being invited to take part in a research study. Before deciding whether or not to take part, it is important to understand why the research is being done, and what it will involve. Please take time to read the following information carefully. If there is anything that is not clear, or you would like more information on, please ask.

What is the purpose of the study?

The study is being carried out as part of the Trent Doctorate in Clinical Psychology course at the Universities of Lincoln and Nottingham. It is designed to look at the different views people may hold on the sexuality of people of various ages.

Why have I been approached?

The study involves asking a number of people to participate, for purposes of comparison.

Do I have to take part?

It is up to you to decide whether or not to take part, as participation is voluntary. If you decide at a later date that you no longer wish to be included in the study, you can contact the researcher and withdraw at any point up until the study is written up (December 2011). You do not have to give a reason for this.

If you decide to take part, you will be asked to sign a consent form.

What will happen to me if I decide to take part?

If you decide to take part in the study, you will be asked to complete two measures; one questionnaire, and one computerised task. Both will ask you about your views on people of different ages, and sexuality. You will also be asked to provide basic demographic information, such as date of birth.

What do I have to do?

You will be asked to complete these measures once only. It is hoped that you will answer the questions as honestly as possible.

What are the possible disadvantages or risks of taking part?

As the study involves thinking about the sexuality of people of different ages, some people may be affected by some of the questions. If this happens, please remember that you are free to withdraw at any time during the study up until write up. You are also welcome to discuss your concerns with the researcher, or ask any further questions at any point.

What are the possible benefits of taking part?

There are no direct benefits to you in taking part. It is hoped that the results could be used to help develop a measure to be used in the treatment of people with beliefs about sexuality that may be potentially problematic. Your input in this process is valued.

What if something goes wrong?

It is not anticipated that things will go wrong, but if you decide that you no longer wish to participate, or have your data included, you can withdraw at any time up until December 2010. Contact details are provided below.

Will my taking part in this study be kept confidential?

Yes. All information collected during the study will be kept confidential. Only the researcher will have access to raw data. All questionnaire data will be stored in locked cabinets at the University of Lincoln in accordance with the Data Protection Act.

Consent forms (which will be the only piece of data with your name on it) will be kept in a separate, locked cabinet from the raw data.

The data from the computer task will be saved onto a secure, encrypted hard drive. This data will be labelled with an anonymous number. It will not be identifiable as being your data by anyone other than the researcher.

When the data is analysed, it will be entered with an anonymous number into a password protected file.

What will happen to the results of the study?

The results will be written up as a doctoral thesis on the Trent Doctorate in Clinical Psychology programme at Universities of Lincoln and Nottingham. It may also be written up for publication in academic journals.

Who is organising and funding the research?

The research is organised by Alison Foster, a doctoral student on the Trent Doctorate in Clinical Psychology programme. The study is not externally funded.

Who has reviewed the study?

The University of Lincoln Ethics committee and Lincolnshire Probation Service.

Contact for further information

Alison Foster

Doctorate in Clinical Psychology

Bridge House

University of Lincoln

Lincoln

LN6 7TS

If you take part, you will be given a copy of this information sheet and your signed consent form to keep.

THANK YOU FOR YOUR INTEREST IN THE RESEARCH

Appendix B. Control Consent Form

Trent Doctorate in Clinical Psychology

Participant identification number:

CONTROL CONSENT FORM

Title of project: Assessing views on age and sexuality

Name of researcher: Alison Foster

Please initial box

1. I confirm that I have read and understood the information sheet dated April 2010(version 1) for the above study and have had the opportunity t ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason, until December 2011. ☐

3. I agree to take part in the above study. ☐

4. I agree that the data collected in this study can be used in conjunction with subsequent research studies, but only in a strictly anonymised form ☐

Name of participant	Date	Signature
Name of person taking consent	Date	Signature

Appendix C. Staff Information Sheet

Trent Doctorate in Clinical Psychology

PARTICIPANT INFORMATION SHEET: STAFF GROUP

Version 2 (July 2011)

Assessing views on age and sexuality

You are being invited to take part in a research study. Before deciding whether or not to take part, it is important to understand why the research is being done, and what it will involve. Please take time to read the following information carefully. If there is anything that is not clear, or you would like more information on, please ask.

What is the purpose of the study?

The study is being carried out as part of the Trent Doctorate in Clinical Psychology course at the Universities of Lincoln and Nottingham. It is designed to look at the different views people may hold on the sexuality of people of various ages.

Why have I been approached?

The study involves asking a number of people to participate, for purposes of comparison. You have been asked to participate as someone who has previously worked, or who is currently working with sexual offenders who have offended against children (under the age of 16).

Do I have to take part?

It is up to you to decide whether or not to take part, as participation is voluntary. If you decide at a later date that you no longer wish to be included in the study, you can contact the researcher and withdraw at any point up until the study is written up (September 2011). You do not have to give a reason for this.

If you decide to take part, you will be asked to sign a consent form.

What will happen to me if I decide to take part?

If you decide to take part in the study, you will be asked to complete two measures; one questionnaire, and one computerised task. Both will ask you about your views on people of different ages, and sexuality. You will also be asked to provide some demographic information, relating to how long you have worked with sex offenders with offences against children.

What do I have to do?

You will be asked to complete these measures once only. It is hoped that you will answer the questions as honestly as possible. The measures will be completed at a time and place convenient to you.

What are the possible disadvantages or risks of taking part?

As the study involves thinking about the sexuality of people of different ages, some people may be affected by some of the questions. If this happens, please remember that you are free to withdraw at any time during the study up until write up. You are also welcome to discuss your concerns with the researcher, or ask any further questions at any point.

What are the possible benefits of taking part?

There are no direct benefits to you in taking part. It is hoped that the results could be used to help develop a measure to be used in the treatment of people with beliefs about sexuality that may be potentially problematic. Your input in this process is valued, and you will be paid a small sum (£5 voucher) for your time.

What happens when the research study stops?

You will continue with your current job as normal. Nothing will be changed by taking part in this study.

What if something goes wrong?

It is not anticipated that things will go wrong, but if you decide that you no longer wish to participate, or have your data included, you can withdraw at any time up until December 2011. Contact details are provided below.

Will my taking part in this study be kept confidential?

Yes. All information collected during the study will be kept confidential.

Only the researcher will have access to raw data. All questionnaire data will be stored in locked cabinets at the University of Lincoln in accordance with the Data Protection Act.

Consent forms (which will be the only piece of data with your name on it) will be kept in a separate, locked cabinet from the raw data.

The data from the computer task will be saved onto a secure, encrypted hard drive. This data will be labelled with an anonymous number. It will not be identifiable as being your data by anyone other than the researcher.

When the data is analysed, it will be entered with an anonymous number into a password protected file.

What will happen to the results of the study?

The results will be written up as a doctoral thesis on the Trent Doctorate in Clinical Psychology programme at Universities of Lincoln and Nottingham. It may also be written up for publication in academic journals. You will never be personally identified.

Who is organising and funding the research?

The research is organised by Alison Foster, a doctoral student on the Trent Doctorate in Clinical Psychology programme. The study is not externally funded.

Who has reviewed the study?

The University of Lincoln Ethics committee

Contact for further information

Alison Foster

Doctorate in Clinical Psychology

Bridge House

University of Lincoln

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(01522) 88 60 29

If you take part, you will be given a copy of this information sheet and your signed consent form to keep.

THANK YOU FOR YOUR INTEREST IN THE RESEARCH

Appendix D. Staff Consent Form

Trent Doctorate in Clinical Psychology

Participant identification number:

STAFF CONSENT FORM

Title of project: Assessing views on age and sexuality

Name of researcher: Alison Foster

Please initial box

1. I confirm that I have read and understood the information sheet dated July 2011 (version 2) for the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason, until December 2011. ☐

3. I agree to take part in the above study. ☐

4. I agree that the data collected in this study can be used in conjunction with subsequent research studies, but only in a strictly anonymised form ☐

Name of participant	Date	Signature
Name of person taking consent	Date	Signature

Appendix E. Receipt of Participant Payment

Trent Doctorate in Clinical Psychology

Receipt of Participant Payment

I confirm that I received the sum of £5 (voucher form) for my time and effort in taking part in the DClinPsych research study.

_____ _____

Signature of Participant Date

_____ _____

Signature of Researcher Date

Appendix F. Demographic Data Sheet

Demographic Information

Gender	M / F
Age	
Profession	
Are you a parent?	Y / N
Do you live with children under 16 years?	Y / N
If yes, please detail gender and age:	
What is your highest level of educational attainment?	

Appendix G. Cognitive Distortion Scale (Gannon, 2006)
Cognitive Distortion Scale

Please indicate to what extent you agree with each of the following statements by circling or ticking one of the answer options.

1. Having sex with a child is not really all that bad because it doesn't really harm the child

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

2. People underestimate how much children know about sex

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

3. Some children know more about sex than adults

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

4. If an adult has sex with a child who enjoys it and seems to want it, it shouldn't be considered a crime

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

5. Men who have sex with a child are usually led into it by the child

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

6. Many children are sexually seductive towards adults

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

7. Most sexual contact between adults and children does not cause any harm

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

8. Some children are mature enough to enjoy a good sex joke with adults

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

9. Children are not as innocent as most people think

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

10. Children that sit in a way that is revealing are suggesting sex

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

11. An 8-year-old can enjoy a good sex joke

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

12. Having sex with a child is a good way to teach them about sexuality

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

13. Children who are unloved by their parents are actually helped by men who have sex with them

0	1	2	3	4
Strongly Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Strongly Agree

Appendix H. Ethical Approval

UNIVERSITY OF LINCOLN

Lincoln, 3-7-2011

Dear Alison Foster,

The Ethics Committee of the School of Psychology would like to inform you that your project on "Differences in beliefs about individuals under the age of 16 being sexual" has been:

☒ **approved**

☐ **approved subject to the following conditions:**

☐ **invited for resubmission, taking into account the following issues:**

.....

.....

☐ **is rejected. An appeal can be made to the Faculty Ethics Committee against this decision (cawalker@lincoln.ac.uk).**

☐ **is referred to the Faculty Ethics Committee. You will automatically be contacted by the chair of the Faculty Ethics Committee about further procedures.**

Yours sincerely,

Emile van der Zee, PhD

Chair of the Ethics Committee
School of Psychology
University of Lincoln
Brayford Campus
Lincoln LN6 7TS
United Kingdom
telephone: +44 (0)1522 886140
fax: +44 (0)1522 886026
e-mail: evanderzee@lincoln.ac.uk
http://www.lincoln.ac.uk/psychology/staff/683.asp

Appendix I. Journal guidelines note

Please note: the following guidelines relating to manuscript submission are taken from Sexual Abuse: A Journal of Resarch and Treatment's (SAJRT) online manuscript submission page.
(http://www.uk.sagepub.com/journalsProdDesc.nav?prodId=Journal201888&crossRegion=eur#tabview=manuscriptSubmission)

The journal paper was written according to APA standards and previously published papers in SAJRT.

SAJRT uses an online submission and review platform. Manuscripts should be submitted electronically to http://mc.manuscriptcentral.com/sajrt. Authors will be required to set up an online account on the SAGE Track system powered by ScholarOne. From their account, a new submission can be initiated. Authors will be asked to provide the required information (author names and contact information, abstract, keywords, etc.) and to upload the "title page" and "main document" separately to ensure that the manuscript is ready for a blind review. The site contains links to an online user's guide (Get Help Now) for help navigating the site.

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